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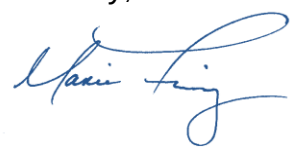
May 31, 2013

California Energy Commission
Dockets Unit
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: **PSEGS VISUAL RESOURCES ANALYSIS REPORT**
PALEN SOLAR ELECTRIC GENERATING SYSTEM
DOCKET NO. (09-AFC-7C)

Enclosed for filing with the California Energy Commission is the electronic version of **PSEGS VISUAL RESOURCE ANALYSIS REPORT**, for the Palen Solar Electric Generating System (09-AFC-7C).

Sincerely,



Marie Fleming

Palen Solar
Electric Generating System
Visual Resources Analysis

(Docket No. 09-AFC-07C)

ATTACHMENT-A: Analysis

Visual Resources Analysis

May: 2013 Palen Solar
Electric Generating System

3DSCAPE

Palen Solar
Electric Generating System
Visual Resources Analysis

(Docket No. 09-AFC-07C)

Attachment-A: Analysis

1.1 Visual Resources Affected Environment

This chapter describes the project study area in terms of its existing value as a visual resource, and describes the applicable regulatory framework for managing and protecting scenic values. Following a brief description of the characteristics and extent of the study area, this section focuses on determining the extent and quality of visual resources in the study area by referencing existing inventory efforts that use the methodology outlined in BLM's Visual Resource Management (VRM) Program.

1.1.1 Laws, Ordinances, Regulations, and Standards

California Desert Conservation Area

The BLM manages over 12 million acres in the California Desert Conservation Area (CDCA). This enormous area of southern California offers very diverse landscape. The CDCA Resource Management Plan (RMP) did not include Visual Resource Management (VRM) Classes. Given the renewable energy applications the CDCA was receiving, and the potential for visual intrusion by utility-scale project proposals, the BLM authorized a Visual Resource Inventory (VRI) for the lands within the Palm Springs South Coast Field Office (PSSCFO). The Palen Solar Electric Generating System (PSEGS) proposal is located on land administered by the PSSCFO. The VRI was completed in 2010. Its relevance is discussed below.

The BLM also manages land based on Multiple Use Classes (MUC). The CDCA defines those classes as follows:

About 4 million acres are Class C (controlled). These include 69 wilderness areas totaling 3,667,020 acres created by Congress with the passage of the California Desert Protection Act in October 1994. These lands are to be preserved in a natural state and access is generally limited to non-motorized, non-mechanized means (i.e., by foot or horseback).

About 4 million acres are Class L (limited use). These lands are managed to protect sensitive, natural, scenic, ecological, and cultural resource values. They provide for generally lower-intensity, carefully controlled multiple uses that do not significantly diminish resource values.

About 1.5 million acres are Class M (moderate use). These lands are managed in a controlled balance between higher intensity use and protection. A wide variety of uses, such as mining, livestock grazing, recreation, energy, and utility development are allowed. Any damage that permitted uses cause must be mitigated.

About 500,000 acres are in Class I (intensive use). These lands are managed for concentrated use to meet human needs Reasonable protection is provided for sensitive natural values. When possible, impacts are mitigated and impacted areas are rehabilitated.

Most of the lands in the project area are designated Class M and Class L.

Federal Lands Policy and Management Act

One of mandates of the Federal Lands Policy and Management Act (FLPMA) is the protection of scenic values. In an effort to enforce scenery protection, the BLM developed a VRM system. BLM's VRM policy is set forth in Manual 8400-1 (BLM 1984), with guidance provided in handbooks H-8410-1 Visual Resource Inventory (BLM 1986a) and H-8431-1 Visual Resource Contrast Rating (BLM 1986b). Additional guidance is contained in the BLM Washington Office Instruction Memorandum 2009-167, Application of the Visual Resource Management Program to Renewable Energy (BLM 2009).

Visual Resource Management

The VRM system provides a way to assess scenery-related issues. It involves three steps: 1) a VRI, 2) establishing visual resource management objectives; and 3) conducting a visual contrast rating exercise. The final step is the one that will be utilized here to assess the PSEGS conformance Visual Resource Management (VRM) Classes.

Scenic Roadways Program

The California Department of Transportation is responsible for designating scenic highways, which, from a visual resource perspective, are treated more rigorously than non-designated roads. A review shows that there are no designated or eligible scenic highways in the immediate area. The nearest road with any designation is SR-62 (Twenty-Nine Palms Highway, which runs east-west north of Joshua Tree National Park). However, Interstate 10 (I-10) is designated as an eligible scenic highway by the County of Riverside, but has not yet been officially designated by the state.

Riverside County General Plan

The Land Use Element of the Riverside General Plan has policies that relate directly or indirectly to visual resources:

- LU 4.1 requires that new developments be located and designed to visually enhance, not degrade the character of the surrounding area. Consideration should be given to preserving natural features, such as unique natural terrain, drainage ways, and native vegetation, wherever possible, particularly where they provide continuity with more extensive regional systems.
- LU 13.1 preserves and protects outstanding scenic vistas and visual features for the enjoyment of the traveling public.
- LU 13.3 ensures that the design and appearance of new landscaping, structures, equipment, signs, or grading within designated and eligible state and county scenic highway corridors are compatible with the surrounding scenic setting or environment.
- LU 13.5 requires new or relocated electric or communication distribution lines, which would be visible from designated and eligible state and county scenic highways, to be placed underground.
- LU 13.8 seeks to avoid the blocking of public views by solid walls.
- LU 20.1 requires that structures be designed to maintain the environmental character in which they are located.

- LU 20.2 requires that development be designed to blend with undeveloped natural contours of the site and avoid an unvaried, unnatural, or manufactured appearance.
- LU 20.4 ensures that development does not adversely impact the open space and rural character of the surrounding area.

The Riverside General Plan has Community Plan Areas that are more specific to individual areas. Desert Center and the Chuckwalla Valley are covered under the Desert Center Area Plan. The Area Plan contains these policies that relate to visual resources:

- DCAP 2.3 assures that the design of new land uses subject to discretionary review visually enhances, and does not degrade, the character of the Desert Center region.
- DCAP 5.1 requires that outdoor lighting use fixtures that minimize effects on the nighttime sky and wildlife habitat areas, except as necessary for security reasons.
- DCAP 9.1 protects the scenic highways within the DCAP from change that would diminish the aesthetic value of adjacent properties through adherence to the policies found in the Scenic Corridors sections of the General Plan Land Use, Multipurpose Open Space, and Circulation Elements.
- DCAP 9.2 supports the designation of I-10 as an eligible and, subsequently, official scenic highway, in accordance with the California State Scenic Highway Program.
- DCAP 10.1 encourages clustering of development for the preservation of contiguous open space.

1.1.2 Tiered Publications and Incorporation by Reference

The project site is located within the BLM's Riverside East Solar Energy Zone (SEZ). This zone was identified by the Solar Programmatic Environmental Impact Statement (Solar PEIS) (BLM 2012) as an area with fewer environmental resource conflicts. These areas possess outstanding direct solar irradiance (insolation) and close access to utility corridors. The exhaustive reviews of the Draft PEIS (DPEIS) led to removing several previously analyzed SEZs from consideration. Riverside East was carried forward for the Solar Final PEIS (FPEIS). This overarching document covers a vast area in a variety of physiographic provinces. This visual resources analysis uses guidance provided in the Solar PEIS and builds on the specificity of this landscape-level evaluation. This visual resources analysis tiers off the DPEIS and FPEIS (40 CFR 1508.28, 40 CFR 1502.20, 43 CFR 46.140).

The Palen Solar Power Project (PSPP) was previously proposed for this site and approved by the California Energy Commission CEC. The environmental documents for PSPP are the Palen Solar Power Project EIS and Final Staff Assessment (FSA), which were prepared by the BLM and CEC respectively. The FSA was approved on December 15, 2010 12/15/2010. That document's visual section is incorporated by reference and is available on CEC's web site. When the PSPP EIS was prepared it relied upon Visual Resource Management Classes prepared for and approved by the BLM in the Devers-Palo Verde 2 EIS. Since that time, the BLM contracted to have a VRI of the entire land base managed by the Palm Springs South Coast Field Office. (PSSCFO). The PSSCFO manages over 130,000 acres of public lands in a five-county area. VRIs rate the field office's overall visual quality through a systematic approach outlined in

the BLM's Manual Handbook H-8410-1 – Visual Resource Inventory. The three primary components of which are:

- Scenic Quality Evaluation
- Sensitivity Level Analysis
- Delineation of Distance Zones

Based on these three components, BLM-administered lands are placed into one of four Visual Resource Inventory Classes that represent the relative value of the visual resources. Classes I and II are the most valued, Class III represents a moderate value, and Class IV represents the least value. The BLM manages its lands based on Visual Resource Management Classes that may or may not ultimately correspond to the class rating of the VRI. The VRI Classes are used during the Resource Management Planning (RMP) process to eventually designate the VRM Class according to land management decisions based on the BLM's multiple-use mandate.

A salient example would be a landscape where the VRI identifies a landscape as Class III and the land management prescription is designated as a renewable energy area. The RMP planning process might designate the area as VRM Class IV so that the objectives of the Class could be met while accommodating the management prescriptions under the current administration's directive to responsively deploy renewable energy project proposals on public lands.

The BLM's PSSCFO RMP was completed in 1994 and the Management Objectives are:

1. Provide protection and enhancement for biological values.
2. Provide for effective management and protection of cultural and paleontological sites and values.
3. Identify, maintain, and enhance recreational opportunities, responsive to local needs and public visitation to the area.
4. Work with local community leadership and law enforcement agencies to provide for safe visits to public land and to discourage illegal uses.
5. Provide for community infrastructure needs to support the residents and economy of the region, with emphasis on energy, communications and mineral materials sites.
6. Coordinate management activities along the border with U.S. and Mexican agencies.
7. Provide for effective fire protection, fire prevention and vegetation management in cooperation with local communities, Fire Safe Councils, and California Department of Forestry and Fire Protection.

As previously stated, the current RMP has no VRM classes and a RMP update is not scheduled. So BLM created Interim Visual Resource Management (IVRM) Classes. This was accomplishable after the baseline visual inventory was completed.

The following Visual Resource Management Objectives have been established for each class in the BLM Manual Handbook H-8410-1 – Visual Resource Inventory:

- Class I—The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.

- Class II—The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
- Class III— The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
- Class IV—The objective of this class is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management 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 through careful location, minimal disturbance, and repeating the basic elements.

The PSSCFO Visual Resource Inventory is also incorporated by reference.

1.1.3 The Chuckwalla Valley Viewshed

The PSEGS project site is centrally located within the Chuckwalla Valley. The Chuckwalla Valley is a distinct physiographic feature within California's Basin and Range Province that constitutes a nearly enclosed viewshed. It is a large landscape feature loosely defined as 40 miles east-west and 15 miles north-south or approximately 380,000 acres. The valley is surrounded by numerous small distinct mountain ranges. Clockwise from north these include: Coxcomb, Granite, Palen, McCoy, Mule, Little Chuckwalla, Chuckwalla, and Eagle Mountain ranges. The mountains rise abruptly out of the valley floor with depositional bajadas making a smooth transition from the planar form of the valley floor to the often dramatic pyramidal forms of the sparsely vegetated mountain landscapes. The tallest mountains tower up to 4000 feet above the desert floor, and while not contiguous, their spatial relationships to each other create a nearly enclosed, endorheic (internally draining) drainage basins. Such endorheic basins are important sand transport corridors that support small, crescent-shaped sand dunes. The dune habitat can provide memorable spring wildflower blooms.

The Chuckwalla Valley, as defined from a physiographic perspective, could be perceived as a less than compelling visual landscape. The valley's gently sloping planar form lacks visual variety. The vegetation is monotypic and relatively uniform in its over cover of the ground plane. Trees are rare, except in scattered washes and developed areas, where they are more ornamental than endemic. The vast pediment and alluvial fan areas at the foot of the surrounding mountains slope gradually toward the depositional basins of Palen and Ford Dry lakes. The valley floor does exhibit some visual variety, however subtle. One notable example is an isolated rock outcrop south of I-10 in the western portion of the basin. Alligator Rock rises out of the valley floor as an isolated and very distinguishable landscape feature. It is a 1.5-mile-long, narrow, linear topographic feature that extends over 200 feet above the surrounding pediment at the base of the Chuckwalla Mountains. Its jagged spine capped by a dark

geologic intrusion is reminiscent of an alligator's back (see Photo 1 in Section-1 of Attachment B). Alligator Rock is a local landmark that has prehistoric and historic significance to the area, and is discussed in more detail in following sections.

What gives the Chuckwalla Valley Viewshed its visual interest, is the combination of valley floor surrounded by varied topographic relief of the surrounding mountain ranges. Eight distinct, identifiable mountain ranges rise abruptly from the valley floor and provide dramatic adjacent scenery (see Photo 2 in Section 1 of Attachment B). This quality adjacent scenery contributes positively to the scenic quality of the Chuckwalla Valley Viewshed.

Several narrow view corridors exist in the Chuckwalla Valley viewshed. In the northwestern corner of the basin there is a gap between the Eagle and Coxcomb mountains through which Pinto Wash flows into the Chuckwalla Valley from a similar basin in adjacent Joshua Tree National Park. This corridor is characteristically cone shaped, with the cone's apex at the intermountain gap and extending into the eastern reaches of the Pinto Basin in a remote area of the Joshua Tree Wilderness Area (WA). The next view corridor extends northward through Palen Valley between the Coxcomb and Granite mountains; this view corridor is slightly wider because of the separation between the two ranges. The other two view corridors are aligned with east and westbound Interstate Freeway (I-10). A map of the Chuckwalla Valley Viewshed which shows the location of the view corridors can be found in Section 1 of Attachment B. It also highlights places, local landmarks, and anthropogenic (human-made) cultural modifications, both historic and recent, which are discussed in the following sections (Section 2 of Attachment B).

Human-made (anthropogenic) landscape modifications in the Chuckwalla Valley Viewshed are varied and in the past have been near human-scale in nature and size. Perhaps the most obvious to visitors is the I-10 corridor that essentially divides the landscape into two separate landscape character units. Agriculture is present in the form of palm and jojoba nurseries. Smaller, less obvious agriculture is scattered throughout the northwestern part of the viewshed on non-BLM lands concentrated in the area north of Desert Center. Mining has been an important land use since the European occupation. Eagle Mountain Mine is by far the largest and most industrial. Eagle Mountain Mine and its self-supporting company town, Eagle Mountain, are located in the northwestern corner of the viewshed and their location is shown on a map in Section 2, Attachment B. Residential land uses vary from individual ranches, rural residences, and the small communities of Lake Tamarisk, Desert Center, and a residential area associated with the Colorado River Aqueduct (CRA) on the east slope of Eagle Mountain at the Eagle Mountain/Hayfield Pumping Station. Commercial land uses are rare and primarily local-service oriented. The commercial ventures, even the iconic café started by Desert Center's founder at the Desert Center interchange, are closed.

The CRA in the Chuckwalla Valley Viewshed traces north to south through the Palen Valley on the east side of the Coxcomb Mountains. It then turns west through a tunnel in the Coxcombs. When it reemerges, the above-ground portion of the aqueduct turns northwesterly, following the topography in a distinct V-shape around the northwestern end of the Chuckwalla Valley. It then turns south, flowing in a concrete-lined canal to the aforementioned pumping station where it is pumped up 400 feet through three nine-foot-diameter steel pipes to a tunnel through the Eagle Mountains. Electrical transmission

lines converge from various directions to supply electricity to power the massive pumps required to raise the water from the reservoir to the tunnel portal.

Other, less obtrusive anthropogenic modifications exist throughout the Chuckwalla Valley Viewshed. These are discussed below when their presence is viewshed and landscape specific.

Vegetative over cover in the Chuckwalla Valley is sparse and noticeably more pronounced on the valley floor. The vegetation is uniquely adapted to the desert environment. The clumpy creosote scrub is the primary vegetation community and gives the valley a moderately coarse landscape texture. The color of the valley is decidedly tan and grey-green. Native tree are rare and typically occur in washes where water is more available. The bajadas typically display a coarse rocky texture. The rocks are covered with desert varnish, which is usually quite dark and in certain lighting conditions, the bajadas have obvious dark bands of colors skirting the mountains' upper reaches. The mountains vary in color based on their geologic compositions, which also influence the color of the desert varnish on the adjacent bajadas.

Riverside East Solar Energy Zone

The PSEGS site occupies a parcel in the eastern half of the BLM's Riverside East Solar Energy Zone (SEZ), which extends for 50 miles from Desert Center to Blythe and roughly parallels the I-10 corridor. Riverside East is the largest of the 17 SEZs identified by the BLM's Solar PEIS as suitable sites for solar energy proposals. The SEZ covers 147,910 acres under the jurisdiction of the BLM's PSSCFO. The DPEIS originally identified more than 200,000 acres; however, 43,439 acres in the northwestern corner of the SEZ were removed to reduce potential impacts, including visual values, to Joshua Tree National Park (JTNP).

Renewable Energy Authorizations

Two solar projects have been authorized by Records of Decisions (ROD) by BLM in the Riverside East SEZ. Both have secured power purchase agreements (PPAs) and are under construction. Genesis Solar Energy Project (GSEP) is located north of Ford Dry Lake, 11.5 miles east of PSEGS. The right-of-way grant for the GSEP is 4,640 acres, 1,808 acres of which will be disturbed by the project. GSEP uses parabolic troughs to superheat a transfer fluid that creates steam to turn a Rakine turbine. This technology is called concentrating solar power (CSP). In somewhat closer proximity is the Desert Sunlight Solar Farm (DSSF), which uses thin-film photovoltaic (PV) solar panels (CaTi) to generate electricity. The DSSF is located on Kaiser Road, 10 miles northwest of the PSGES site, in the northwestern part of the Chuckwalla Valley Viewshed. It is east of the Eagle Mountain Mine and is surrounded on three sides by JTNP, 1.4 miles from the closest park boundary. Connected actions that received entitlements with the DSSF include a 230kV gen-tie line and Southern California Edison's Red Bluff Substation. The presence of these large industrial utility-scale renewable energy projects and their requisite infrastructure is discussed in the following sections.

Additionally, there are seven solar renewable energy applications pending approval in the Riverside East SEZ. Five of these are PV solar and the other two are CSP projects. These projects range in size from 930 acres to 29,480 acres. These applications could potentially cover approximately 57,000 acres or 39% of the Riverside East SEZ. With pending construction of the Devers-Palo Verde 2 Transmission Line and the

massive Red Bluff Substation, the required infrastructure will be in place to potentially meet their proposed transmission requirements.

1.1.4 Sensitive Receptor Location Selection Process

Sensitive receptors (SR) are vantage points on the landscape that offer views to the project site that represent important public and private views of the PSEGS project. Many aspects are taken into account to identify which vantage points are most visually sensitive. Extensive research was conducted to fully evaluate where sensitive receptors are located within the Chuckwalla Valley Viewshed. The tertiary research relied heavily on previous studies of the visual environment and included published visual studies of the Palen Solar Power Plant EIS. The key observation points (KOPs) for the PSPP EIS were researched and used where applicable. However, the PSEGS project proposes a CSP project that has significantly more vertical presence. This requires using a much larger visual impact threshold distance in an effort to make certain all potentially visible areas are included in the analysis. Other documents used were Devers-Palo Verde 2 EIS, Desert Sunlight Solar Farm EIS, Genesis Solar Energy EIS, and the documentation of visual values from documents provided by BLM's Palm Springs South Coast Field Office's web site. Secondary research included BLM's Desert Access Guides, USGS quadrangle maps (1: 24,000, 1:100,000, and 1:250,000), recent best science research on visual impact threshold distances of renewable energy projects (Argonne National Laboratory), theoretical prediction of glare potential from renewable energy projects (Sandia National Laboratory), and the EISs for Rio Mesa and Hidden Hills projects proposed by the same applicant using similar technology. Additionally, as stated earlier, the entire breadth of BLM's Solar PEIS is taken into consideration, particularly those discussions centered on the Riverside East SEZ.

Primary Research

Primary research included detailed and extensive geographic information system GIS modeling exercises to identify from where the primary PSEGS project components could be visible. Viewshed delineation studies were performed utilizing reference points from: (top of the power tower, top of the air-cooled condenser, and top of the heliostat field). Additionally, extensive Google Earth Pro, Street View reconnaissance, and a field reconnaissance were conducted, as well as, a photographic survey. Input from federal land managers and field staff was also included. There was also dialogue with Joshua Tree National Park and government-to-government consultation with interested Native American Tribes regarding the location of sensitive receptors that they deem important.

Sensitive visual receptors include those who will be most cognizant and concerned about the Chuckwalla Valley's visual landscape and any change that may occur as a result of land management decisions. Originally, there were over 20 SR points located within our conservative 30-mile-radius (3146.99 square miles) visual impact threshold distance (VITD) boundary. Recent best science conducted for modern multi-megawatt wind turbines substantiates the fact that the largest wind turbine generators are discernible from over 25 miles distant. Given the adjacency of JTNP and its sensitive receptors and dark sky, great care was given to areas administered by the National Park Service (NPS). The viewshed delineation and subsequent analysis of other data layers revealed that the PSEGS viewshed infringes on 4.86% of the National Park. Because of the proximity of the Coxcomb Mountains, which are a part of the JTNP WA, 10.1% of the JTNP WA is within the PSEGS viewshed.

The Chuckwalla Valley

The Chuckwalla Valley and its environs have a complex prehistoric and historic heritage. Understanding the episodes is critical in the documentation process for identifying potential sensitive visual receptors. A synopsis of this history is presented below.

Native American Occupation

This part of the Sonoran Desert is home to a millennium of Native American activities. This long occupation has created a plethora of culturally sensitive sites and resources. BLM protects many of the larger, better documented sites by placing restrictive land use designations for the resource areas. Good examples are Alligator Rock, Corn Springs, and McCoy Springs. Native American occupation is much larger than the Chuckwalla Valley. To the north and east are the legendary Blythe intaglios (anthropomorphic geoglyphs) etched into the desert floor.

Native American rock art panels are not uncommon throughout the landscape and are typically located near water sources or lithic procurement rock outcrops. Often accesses to these cultural features are provided by prehistoric trails that are sometimes obvious features in the desert pavement. They are particularly apparent in rocky bajada areas. To make travel less egregious, indigenous people cleared the large rocks from the trail; these actions had the effect of making the trails obvious parallel lines on the ground plane (see photo 5 Section 1 in Attachment B). These landscape elements are extremely important to the local indigenous tribes and are a part of their creation story. See the Cultural Resources Report for full disclosure of the cultural resources of the Chuckwalla Valley.

European Occupation

More recently the European occupation and settlement of the Chuckwalla Valley adds an historic element to the visual landscape. The area was an important overland stage route in the 1860s. The Bradshaw Trail traverses southeastern Riverside County and was established to connect San Bernardino with the gold fields of La Paz, Arizona. The trail's historical significance is substantiated by its federal designation as a National Back Country Byway. William Bradshaw founded the trail with the assistance of Native Americans who provided vital information on their historic trade routes and water sources that were necessary for travel through the desert. The road is now maintained by Riverside County and is continuously accessible from Wiley's Well Road to near North Shore in the northern part of Imperial County. The Bradshaw Trail is almost exclusively located on the Chuckwalla Bench, which is on the southern side of the Little Chuckwalla and Chuckwalla mountains; these ranges represent a vertically and horizontally formidable topographic obstruction between the Trail and the PSEGS project site. Later sections evaluate the potential impact on the Bradshaw Trail Back Country Byway.

Desert Center has been the nadir of the Chuckwalla Valley since its settlement by Stephen Ragsdale in 1921. It served as an outpost for early travelers on the State Route 60, the predecessor of I-10. The desert outpost of Desert Center has continued an unlikely existence by a number of historically significant episodes.

In 1933 Metropolitan Water District began construction of the Colorado River Aqueduct, which traverses the northern part of the Chuckwalla Valley. The CRA was heralded as an engineering marvel and

employed tens of thousands of workers during its four-year construction period throughout the Great Depression. The CRA is still a part of the historical fabric of the Chuckwalla Valley, and its infrastructure can be a dominant a portion of the valley's landscape (see Section 3 in Attachment B).

During World War II the entire Colorado Desert and parts of the larger Sonoran Desert hosted a military training center for soldiers preparing for the North African campaign. General George S. Patton conceived this maneuver area and was its commander from 1942 until 1944. The Desert Training Center (DTC) encompassed over 18,000 square miles of the desert and trained more than a million soldiers. The Chuckwalla Valley is home to many of the DTC's operational centers including the Desert Center Army Airfield, Camp Coxcomb, and Camp Young. The California-Arizona Maneuvers Area (CAMA), as it was later known, was soon abandoned as the Allies' position in the campaign made dramatic improvement. After 70 years of the harsh desert climate, little is left of the divisional camps that were once tent cities. Concrete foundations, rock-lined walkways, and various infrastructure and artifacts are all that remain (see Photo 4 Section 1 in Attachment B).

In 1948 industrialist Henry Kaiser founded the Eagle Mountain Mine 10 miles northwest of Desert Center. The now defunct open pit iron ore mine had an itinerate population of over 4,000 in the self-contained company town of Eagle Mountain. In the early 1980s the mine's output dropped and its population dwindled. Today it is a ghost town, gated and locked to the public.

Interstate 10 was built in stages during the 1960s on the same route as SR-60 through the Chuckwalla Valley. Signage for SR-60 was removed by 1972 in this area. Unlike much of California's Interstate System, no portions of the old SR-60 route that would typically afford state designation as a historic route are still in use.

Land ownership in the Chuckwalla Valley Viewshed is primarily under the jurisdiction of BLM. The NPS manages lands on the western and northern fringes of the viewshed. Private in-holdings are scattered throughout the valley, but are most prevalent in the eastern and central parts of the Chuckwalla Valley Viewshed. There is also the typical checkerboard of sections (640 acres) of state land allocations.

After completing the extensive vetting process intended to identify all the SR points, the primary research was undertaken to visit those areas and photo document their baseline visual conditions. Subsequently, a multi-criteria decision analysis was conducted on the SR locations consisting of eight aspects relating to visual values. The quantitative analysis was designed to identify which SR locations were most affected. The status of these sensitive receptor locations is elevated to key observation points and utilized in the visual impact analysis for the PSEGS potential impact on the Chuckwalla Valley viewshed. This will be presented in the appropriate sections that follow.

1.1.5 Site Reconnaissance/Photographic Survey

This primary research was conducted on April 10, 2013 and was accomplished as a team exercise executed by three professionals with over 40 cumulative years of visual resource experience. One of the team members has been trained by the BLM on the proper implementation of VRM at BLM's National Training Center. VRM stresses the importance of conducting these resource surveys during the time of

year when that resource area's visitor usage is at its height. The Chuckwalla Valley can be a harsh environment for many months of the year. Spring, fall, and winter are the most favorable seasons to seek recreational opportunities in the area. However, given the fact that this desert landscape has the potential for dramatic wildflower blooms, it is fair to say that spring is the most popular time of year for visitors to seek and experience dramatic scenery. VRM guidance specifically addresses the importance of wildflower blooms in their evaluation forms. Early April, when the site reconnaissance was conducted, is an excellent time to see the desert in bloom. The preponderance and timing of the desert bloom is difficult to predict. The 2013 bloom season was not a good one in the Colorado Desert; very few blooms were encountered and where mainly found in the mouths of sandy washes. None of the area's signature flower, the Desert Lily, was encountered, not even at the sanctuary that bears their name. However, 20 more miles to the north in the Mojave Desert, its indicator species, the Joshua Tree, bloomed in what has been called a once-in-a-lifetime event. Joshua Trees are extremely rare in the Chuckwalla Viewshed and its immediate environs.

1.1.6 Description of Sensitive Receptor (SR) Locations

This section will identify and characterize the SR locations identified in the Chuckwalla Valley Viewshed. The baseline visual conditions for the SRs view towards the PSEGS site are included in Section 3 of Attachment B.

SR – 1 Pinto Wells

Pinto Wells is a geographic place in the southeastern corner of the Pinto Basin, which is wholly contained within Joshua Tree National Park. It is near a point where a small gap between the Eagle and Coxcomb mountains transitions to the more southern Chuckwalla Valley. This gap is also occupied by Pinto Wash; the Pinto Basin's primary drainage feature that runs east to west through the basin before turning abruptly south to flow through the gap as it approaches the Coxcomb Mountains, which delineate the eastern edge of this large physiographic feature.

Pinto Wells is within JTNF, approximately 0.25 mile south and east of the massive Joshua Tree Wilderness Area. Being a NPS-designated wilderness area (WA), access to Pinto Wells from JTNP is by foot or horseback. It is approximately 15 miles east of the nearest road, Old Dale Road. Access from the south through the northern reaches of the Chuckwalla Valley is via a labyrinth of little-traveled, rocky dirt roads. These roads are primarily used to access infrastructure of the Colorado River Aqueduct, which circumnavigates the northern end of the Chuckwalla Valley. Besides its significance as an historic/prehistoric water source in a desert, Pinto Wells now serves as the location of a NPS air quality monitoring station that uses a particle monitor to measure atmospheric visibility, and gathers other pertinent meteorological data used by the NPS to monitor changes in air quality. Fifty of these sampling stations are located in national parks throughout the contiguous 48 states. Access to Pinto Wells from the south (Chuckwalla Valley) is impeded by a locked gate at the boundary of JTNP. Pinto Wells is just less than 2 miles north of the locked gate along a dirt road that parallels Pinto Wash. A wooden-pole electrical distribution line also parallels the access road. There is security-fenced building, towers and air quality sensing equipment located at the NPS facility, which is southwest of the geographic place called Pinto Wells.

Pinto Wells is 19.2 miles from PSGES's nearest power tower on an azimuth of 152° east of north. Pinto Wells is at an elevation of 1058 feet AMSL, or just over 500 feet topographically superior to the PSEGS, across the gently and uniformly southeastern-sloping Chuckwalla Valley. Pinto Wells is spatially located on the USGS 1:24,000 Pinto Wells quadrangle. Specifically, it is in the near the center of Section 4 T. 3 S., R. 15 E. of the SBB&M.

From a visual resources perspective, this location was identified by the viewshed delineation study as being within the northern portion of the PSEGS viewshed. It is also somewhat unique in its physiographic context. The gap through which Pinto Wash exits the Pinto Basin creates a narrow view corridor that extends northward into remote and lightly used portions of the Pinto Basin, extending all the way to the Pinto Mountains near Outlaw Mine, which is very near the outer boundary of PSEGS's 30-mile radius of VITD.

In addition to the cultural modifications of the aforementioned NPS meteorological station, there are other historic and current modifications influencing the intactness of the viewshed from Pinto Wells in the line-of-sight direction towards the PSEGS site. Just over 2 miles south of SR-1 is an open portion of the Colorado River Aqueduct. This Metropolitan Water District (MWD) project has been a part of the Mojave Desert landscape fabric since it was constructed during the Great Depression. A "river" of water flowing in a concrete-lined channel through a parched desert landscape is an incongruent landscape element. Its route through the Palen and Chuckwalla Valleys is in no small part why Desert Center was established. It has been a contrasting landscape element on this landscape for almost 80 years.

Kaiser's Eagle Mountain Mine is one of the largest open-pit iron ore mines in the United States. It has also been part a part of the Chuckwalla Valley's landscape character for nearly as long as the CRA. The narrow view corridor of the Pinto Wells Gap obstructs direct views of the mine from SR-1. Eagle Mountain Mines was an active strip mining operation for 34 years from 1948 through 1982. Since its closure, the abandoned mine has been the subject of various development proposals. In the late 1980s the huge open pit mine was proposed as a landfill. More recently Eagle Crest Energy Company proposed a 1,300-megawatt (MW), pumped storage hydropower project for the site. On January 30, 2012 the Federal Energy Commission issued a final environmental impact statement (FEIS) on the project.

Currently under construction, the Desert Sunlight Solar Farm is located to the south of the CRA in the viewshed from Pinto Wells (SR-1). DSSF is a utility-scale photovoltaic electric generating project located on over 4,000 acres (6 square miles) of BLM-administered land in the northern portion of the Chuckwalla Valley.

The project, when completed, will have a faceplate capacity of 550 MW of renewable energy electricity, making it one of the largest in the world. Dark blue, nearly black PV panels, the project's major component, contrast distinctly against the color and texture of the ground plane. When viewed from a distance under certain lighting conditions, the details of PV panels become indistinct and they can be perceived as a body of water. DSSF's geometric form, hard lines, and industrial nature are also uncharacteristic in this desert landscape. The project has a 230kV overhead transmission line that is currently under construction. This gen-tie line is supported by steel monopoles, pretreated with a

weathering agent designed to appear as rusty brown in color. This line parallels Kaiser Road to its eventual termination at the Southern California Edison Red Bluff Substation located on the southern side of I-10, 5.25 miles east of Desert Center. The gen-tie's monopoles and conductors introduce incongruent vertical and horizontal lines on the Chuckwalla Valley's viewshed. The Red Bluff substation is discussed in more detail in the baseline visual description of SR-10.

SR – 2 Camp Coxcomb

Camp Coxcomb is located west of SR-177 in the western portion of Palen Valley, which is a tributary valley to the larger physiographic feature the Chuckwalla Valley and is physically separated by the north-south-trending Coxcomb Mountains. SR-177 and its paralleling utility infrastructure are the major anthropogenic features that detract from a somewhat naturally appearing desert landscape.

Camp Coxcomb is one of the 10 Desert Training Centers' World War II (WW II) army military outposts used by General George S. Patton to train and harden troops to fight the Axis forces in North Africa. For over three years, millions of soldiers trained in this vast California-Arizona Maneuver Area, as it was later renamed. SR-2 is located along Coxcomb Monument Road, the primary portal to the camp. When it was abandoned in 1945, it was left to the harsh desert environment and little still exists of its once formidable presence that housed thousands of soldiers. The Patton era is important in the historical fabric of the Chuckwalla Valley and beyond. Eighteen miles west of Desert Center, in the desert hamlet of Chiriaco Summit, there is a museum that commemorates the Patton era.

SR-2 is 16 miles in a northeasterly direction from Desert Center and 10 miles south of SR-62 (Twenty-Nine Palms Highway). From this vantage point afford a mostly unobstructed view down the Palen Valley towards PSEGS. The Palen Valley is sandier than the adjacent Chuckwalla Valley and the ground plane is a distinctively lighter color than the desert pavement of the Chuckwalla Valley. Coxcomb Monument Road and Palen Pass Road are BLM-designated routes of travel, the latter cutting a striking horizontal line across the Palen Valley on its way to Palen Pass, and a motor tour of other WW II training sites in the Palen and Granite mountains to the east of SR-2 and SR-177.

SR-2 is located at an elevation of 820 feet AMSL. Its position on the landscape is 250 feet superior to PSEGS project site. SR-2 is located near the NW 1/4, SE 1/4, Sec. 13, T3S, R16E. SBB&M. The view to the project site is on an azimuth of 170° or just slightly east of due south. The view corridor down the Palen Valley is constrained by the vertical presence of the Coxcomb Mountains on the west and the Palen Mountains on the east. The proximity of these soaring, distinct mountain ranges contributes positively to the valley scenic quality. The sensitive receptors at Camp Coxcomb (SR-2) are 14.8 miles from the nearest power tower at the PSEGS project site. See Section 3 Attachment B for a photograph that is illustrative of the baseline visual conditions from SR-2. The foreground/middleground is dominated by patchy creosote scrub that displays a moderately coarse texture. The view was captured in the spring, so the vegetation is quite green. Further into the middleground, scrub yields to the sparsely vegetated Palen Dry Lake. Its sandy color and lightly vegetated condition make it easily seen from slightly elevated perspectives. The foothills of the Palen Mountains are visible in the left (eastern) part of the view frame. In the background the Chuckwalla Mountains create a jagged line across the horizon. This view has little visible anthropogenic modifications and is a quite naturally appearing landscape.

SR – 3 Coxcomb Mountains WA

SR-3 is located in the National Park Service's Joshua Tree National Park in the scenic and extremely rugged Coxcomb Mountains. The Coxcombs rise dramatically out of the Palen and Chuckwalla valleys and are surrounded by extensive bajadas and alluvial fans. This distinct mountain range rises nearly 4,000 feet above the Chuckwalla and Palen valleys to the south and east, respectively, and Pinto Basin to the west. The Coxcombs acme is Aqua Peak, which has an elevation of 4416 feet AMSL. The Coxcombs are perhaps one of the least visited portions of JTNP. This is because of the lack of visitor services and no established and maintained trail network. However, this road-less wilderness area is not inaccessible. Trail web sites describe routes to access what is referred to as the Coxcomb's Inner basin, which is more than 10 miles north of SR-3 and accessed from SR-62 (Twenty-Nine Palms Highway). As with most remote locations in this area, access is through desert washes. This wilderness area, therefore, can be construed as having a limited recreational opportunity spectrum and represents an extremely low use area, compared with the more popular and trodden portions of JTNP. This area is used by rugged, true solitude seekers.

Wilderness Areas are typically considered areas of extremely high visual sensitivity and viewer concern. This is primarily because recreationists enjoying these areas are extremely cognizant of their surroundings and potentially are there exclusively to take in and enjoy dramatic, naturally appearing desert scenery. Additionally, the duration of their views can be long and their attention focused. BLM WAs almost always have a VRM Class I categorization; the most restrictive from a VRM perspective. NPS WAs can certainly be construed as being equally if not more sensitive, given the fact that the NPS has no multiple use mandates, unlike the BLM.

SR-3 is easily accessible from SR-177, just over 10 miles northeasterly from Desert Center. The vantage point is on a series of low hills, several hundred yards from the travel-way and a hundred yards inside the plainly marked WA boundary. SR-3 is approximately 50 feet topographically superior to the valley floor where the Palen and Chuckwalla valleys bifurcate. The area in the vicinity of SR-3, however, is nearly devoid of significant vegetation. On close examination of the ground plane, the desert pavement surrounding the chosen vantage point exhibits a visual variety of colors due to the complex local geology of the mountain's granite bedrock, and the accumulation of layers of desert varnish over time (desert patina). Of particular note is the preponderance of orange and reddish varnished rocks which is testament to the high levels of iron in the areas geology.

Views from SR-3 are panoramic and compelling, with the Granite and Palen mountains 10 miles to the east. Towards the PSEGS site this slightly superior topographic perspective affords views of the Palen and Chuckwalla valleys and includes foreground and middleground views of the Palen Dry Lake bed and its adjacent low sand dune complex. The background is dominated by the jagged silhouette of the Chuckwalla and Mule mountains, which also exhibit dramatic pyramidal forms along the viewshed's horizon. The spatial separation of these distinct, identifiable forms gives the landscape from SR-3 unusual depth and provides visual variety. SR-3 is located in the NE 1/4, NE 1/4, Sec. 15, T4S, R16E SBB&M. The azimuth for this view is centered on 152° and exactly 9 miles to the nearest power tower on the PSEGS site. The viewshed from SR-3 is relatively naturally appearing; the only noticeable anthropogenic modifications are the slightly intermittent horizontal lines introduced by SR-177 and the

paralleling electrical distribution lines. Additionally, glints of reflected sunlight are intermittently visible from I-10 off the spectral surfaces of moving vehicles. To actually observe the movement of the tractor trailers on the freeway takes concentrated and focused viewing and/or exceptional atmospheric clarity. The photographic image was captured from SR-3 in the early afternoon hours. The wind was blowing steadily at greater than 10 knots; consequently, the fine sediments suspended in the atmosphere from the intervening Palen Dry Lake bed compromised the visual clarity of the view.

In the immediate foreground is sparse creosote scrub and SR-177. Further into the foreground the pediment transitions to the lakebed and the vegetation community changes to a more consistent ground cover that is noticeably more verdant. In the middleground, from this topographically superior perspective, the vastness of the Palen Dry Lake bed is more apparent, with the Palens rising out of the playa in the right (eastern) portion of the view frame. Beyond that is the I-10 corridor. The Chuckwalla Mountains' jagged hazy silhouette forms the background.

SR – 4 Desert Lily Sanctuary ACEC

The Desert Lily area of critical environmental concern (ACEC) is the location of SR-4. The ACEC is BLM administered public land adjacent to and east of SR-177. It became officially designated as an ACEC by the Desert Protection Act in 1994. This ACEC is approximately 2,000 acres in size and is located at the northwestern edge of Palen Dry Lake. The ACEC is managed to protect and enhance the habitat of its namesake desert wildflower. There is signage on SR-177 giving travelers notice that they are approaching the sanctuary. The well-maintained aggregate driveway leads patrons to a large parking area. At the southern edge of the parking area is a kiosk that explains the desert's early naturalist benefactor's contributions and the unusual habitat adaptation of the elusive desert wildflower that requires precise environmental variables to flourish.

The area is characterized by unusually dense and tall desert creosote scrub. The elevation of SR-4 is 503 feet AMSL, so it is approximately 74 feet topographically lower than the elevation of the PSEGS site. This type of visual perspective is termed, a topographically inferior perspective. This is testament to SR-4's location adjacent to Palen Dry Lake. The Chuckwalla Valley slopes downward northwest to southeast, at a nearly imperceptible grade. SR-4's topographically inferior perspective and the healthy creosote vegetation will almost completely obscure views to the ground plane of the project site. The ground plane in the vicinity of the Desert Lily ACEC is dominated by a multi-hued desert pavement. Visitors to the ACEC would most likely be in the spring months (February through April), during the unpredictable wildflower bloom season. The potential exists to see these spectacular plants that bear a striking resemblance, but somewhat diminutive, to domesticated lily species. The surrounding mountains remain apparent and dramatic; however, the southerly portion of the view, of which PSEGS would be a part, is partially obscured by the vegetative screening. SR-4 is located in the NW 1/4, NE 1/4, Sec. 27, T4S, R16E SBB&M. The view from SR-4 is 8 miles from the project site on an azimuth of 140°.

SR – 5 Desert Center Army Airfield (DCAA)/Chuckwalla Valley Raceway (CVR)

DCAA/CVR is the location of SR-5. The airport was original owned by Stephen Ragsdale, who also founded the desert outpost in 1921 and who, over time, built an auto repair facility, gas station, and restaurant. The entrance to SR-5 is 4.75 miles from Desert Center. The airfield has a long history in the

fabric of the Chuckwalla Valley. First a private airfield with a single dirt runway, it was later a general aviation airport. During the Patton era it was greatly expanded and improved to accommodate the CAMA operations. Later it was turned over to Riverside County from the Corps of Engineers. Today the county leases the airport to the owners of CVR. The reason this area is considered as a sensitive receptor location is because of its historical significance during the Desert Training Center era. The other historically important point in the immediate area is to the east of SR-5 at a location known as Gruendikes Well. Bill Gruendike was an early desert prospector from whom Ragsdale bought what later became known as Desert Center. However, now being leased from the county, the area can be considered as private property and access to the CVR, along with its historical remains, is strictly regulated. In a short stay there, before being asked to leave, all that was observed of the WW II-era airfield were scattered concrete foundations, utility poles, various artifacts, and a steel lattice tower.

The view from SR-5 is northwest of the primary runway near the office of the CVR. SR-5 is located in the SW 1/4, NE 1/4, Sec. 8, T5S, R16E SBB&M. The view to the PSEGS site is on an azimuth of 140° and a distance of 7.5 miles. The DCAA/CVR vantage point is located at an elevation of 545 feet AMSL, which is nearly the same elevation as the PSEGS site. Therefore, this is a normal perspective. The foreground of this view is dominated by relatively low, sparse small scrubs and grasses. The ground plane is distinctively planar in form. Farther into the foreground a wooden H-frame electrical distribution line crosses the view. In the middleground of the area are larger steel lattice towers that parallel the I-10 corridor. The motion of the tractor trailers is visible above the higher ground and vegetation in the southern (right) portion of view. Farther to the right is the under-construction Red Bluff Substation, visible against the backdrop of the Chuckwalla Mountains. From this normal viewing perspective Palen Dry Lake bed is not visible. The Palen Mountains rise out of the lakebed in the left (northern) portion of the view.

SR – 6 Lake Tamarisk

SR-6 is located 2 miles north of Desert Center on Kaiser Road (County Route R2). Lake Tamarisk is a residential community originally built by Kaiser Steel Corporation. Now it is a privately owned, 150-space mobile home and RV resort.

In addition, there are approximately 50 single-family residential structures that surround a regulation nine-hole public play golf course, including three large water features. The course is a Riverside County golf course. There is also a County of Riverside library and fire station that are adjacent to each other on the southeastern intersection of Parkview Dr. and Lake Tamarisk Dr. Ornamental shade trees are numerous in the residential area; therefore, interior views to the project site are intermittently screened by their canopies. The California Environmental Quality Act (CEQA) states specifically that it is concerned with public views, residential views are private views. However, Lake Tamarisk is by far the largest concentration of captive viewers in the Chuckwalla Valley. The residences on the eastern side of the development will be the most directly impacted. One could reasonably expect them to cherish their unobstructed views of the open space: the open valley, the mountainous silhouettes, and dark skies. However, their eastern viewshed is not pristine; there are agricultural operations with residential structures and ornamental vegetation. One could also assume sporadic dusk-till-dawn security lighting on both sides of SR-177, which is 1 mile away.

SR-6 is located at the northeast intersection of Oasis Rd. and Parkview Dr. and approximates the views that recreationists might experience from the golf course. SR-6 is located 10.25 miles from the closest power tower on an azimuth of 110°. SR-6 is located in the NW 1/4, SW 1/4, Sec. 14, T5S, R15E SBB&M. SR-6 is at an elevation of 736 feet AMSL, or 159 feet superior to the PSEGS site.

SR – 7 Big Wash

Big Wash is a named wash that descends in an easterly direction out of the Eagle Mountains. Its name no doubt derived from its impressive width. At its mouth it is nearly a mile across. It is located within JTNP, approximately 1.5 miles east of the Joshua Tree WA boundary. The mouth of Big Wash is crossed by an underground portion of Colorado River Aqueduct. The ground plane appears to be quite modified, with large berms of rock and sand. There is also an aqueduct-related gaging station near SR-7 that offers an insight into why there has been landform alteration in the wash. The view to the project is partially obscured by a mountain outlier that rises abruptly 500 feet out of the eastern bajada of the Eagle Mountains. SR-7 is at an elevation of 1287 feet AMSL, or 737 feet topographically superior the PSEGS site, which is 15.9 miles on an azimuth of 115°.

SR-7 was visited in the late morning hours as the prevailing winds began to blow. As the winds hit Palen Dry Lake, the fine sediments of the lakebed became suspended as atmospheric particulate matter. Visual clarity (visibility) began to noticeably degrade in the direction of the PSEGS site, which is located south of the area of deflation. Additionally, the gen-tie line for Desert Sunlight Solar Project was being constructed perpendicular to the middleground of the viewshed. These construction activities could have added cumulatively to a reduced visibility by a common wind event.

SR – 8 Dragon Wash

Like Big Wash, Dragon Wash is an easterly trending drainage from the Eagle Mountains that empties into the Chuckwalla Valley's endorheic basin. Unlike Big Wash it is more human-scale and typical of this landscape. Dragon Wash is 3.5 miles south of Big Wash and its alluvial fan more pronounced, providing easier access than Big Wash. SR-8 is located within JTNP, approximately a mile from the JTNP WA. SR-8 is located in the SE 1/4, NE 1/4, Sec. 36, T4S, R14E SBB&M.

The visual resource reconnaissance team was escorted to SR-8 by a BLM Field Office Archaeologist. He had conducted a prior visit to determine the area's cultural resource potential. The mouth of Dragon Wash is located less than 100 meters east of Hayfield Road. There are several well preserved prehistoric rock art panels and historically pecked rocks. Dragon Wash was more hospitable than Big Wash, the terrain less rugged, and populated by Ironwood trees, which soften the desert landscape and provide rare shade. The additional presence of rock art might also induce recreationists to pause a moment longer, and take notice of this expansive view of the southern Chuckwalla Valley.

SR-8 is located at the northern flank of the mouth of Dragon Wash on a large mass of rock at the canyon end's northern wall. The elevation of SR-8 is 1390 feet AMSL, or 803 feet topographically superior to the PSEGS project site. The camera azimuth from SR-8 is 100°. The nearest power tower is approximately16 miles from potential sensitive receptors at Dragon Wash (SR-8).

The left (northern) side of the view demonstrates the topographic screening created by the end of the northern canyon wall. The central portion of the view shows the expanse of the Chuckwalla Valley, with the Chuckwalla Mountains defining the southern (right) viewshed limits. In the immediate foreground the conductors of a double-circuited electrical transmission line appear as six horizontal lines across the skyline. Just out of view to the south (right) is a steel lattice transmission line support structure that is approximately 100 feet tall. The transmission line parallels the base of the Eagle Mountains to the MWD pumping station to the north before turning more easterly and crossing the northern portion of the Chuckwalla Valley and traversing the Coxcomb Mountains. South of this point the transmission line parallels I-10. In the background of this view, the ground plane exhibits a noticeably lighter colored form at the base of the Palen Mountains, Palen Dry Lake. The hazy silhouette of the McCoy Mountains is visible beyond the Palens. This vantage point is testament to the vastness of the Chuckwalla Valley viewshed as the McCoy Mountains are nearly 40 miles distant.

SR – 9 Alligator Rock ACEC

Alligator Rock is located within public land administered by the BLM and managed to protect significant prehistoric resources in the area. There are pictographs and lithic procurement areas. The ACEC is 7,726 acres in size; the most notable landscape feature is the local landmark known as Alligator Rock. The rocky outcrop is almost 1.5 miles long and trends in a southwest to northeast direction. Its base is defined by the 1000-foot contour line; its acme is a benchmark named Gator at an elevation of 1267 feet AMSL for a topographic relief of 267 feet. Alligator Rock's serpentine form is 750 feet at its widest point. Along the spine of the rock outcrop is a geologic intrusion of a harder, darker rock lithology that is less erosive than the remainder of the formation. This phenomenon recreates a shadow-like effect along the outcrop's summit that was no doubt, an inspiration for its name. A photograph of this feature is available in Section 1 of Attachment B (Photo1).

In addition to Alligator Rock's cultural significance, it is also a part of Desert Center's historical fabric. Stephen Ragsdale, the outpost's founder and patriarch, is rumored to have retreated to a place at the northern end of the formation to write his poetic musings, which were sold at the gas station and published in local publications.

SR-9 is located in the SE 1/4, SW 1/4, Sec. 27, T5S, R15E SBB&M. The vantage point chosen for SR-9 is near the center of the outcrop on its eastern flank. The camera azimuth from this location to the PSEGS site is nearly due east (90°) and it is 10.3 miles to the nearest power tower. The foreground of this view is dominated by creosote scrub and small ironwood trees. The ground plane is sandy with a very light grey color and a smooth texture. The clumpy scrub has an irregular, moderately coarse texture. The site visit was conducted in early April, so the vegetation is quite verdant. This, of course, changes to a browner hue as the spring ends and summer progresses. In the foreground, a relatively new electric transmission line with pre-weathered steel monopole support structures crosses the view from left to right. The poles and their conductors introduce unnatural horizontal and vertical anthropogenic elements into the otherwise naturally appearing landscape. They act as focal points that detract from the pyramidal forms of the Chuckwalla, Palen, and McCoy mountains that afford high quality adjacent scenery. Transmission lines are becoming a pervasive feature in the Chuckwalla Valley; they were mainly confined to the BLM utility corridor that parallels I-10 until additional infrastructure was required for

renewable energy electrical generating projects in this valley and beyond. Five miles distant into the foreground/middleground, the under-construction Red Bluff Substation is visible. At this distance the details of its individual elements are not particularly discernible. The cleared ground and the cut and fill slopes contrast against the endemic ground cover. Its position, from this perspective, has a backdrop of the Chuckwalla Mountains, making it less conspicuous than the transmission line towers that are sky-lined to the left (north).

SR – 10 Interstate-10 Eastbound

SR-10 is located along the heavily traveled I-10 transportation corridor. SR-10 is located 6.4 miles from the nearest power tower with a camera azimuth of 98°or slightly south of east. The elevation of the vantage point is 810 feet AMSL, or 227 feet topographically superior to the PSEGS project site. SR-10 is located in the NW 1/4, SE 1/4, Sec. 29, T5S, R16E SBB&M. The creosote scrub in this portion of the valley is relatively dense in proximity to nearby washes draining the Chuckwalla Mountains. A BLM-designated utility corridor roughly parallels I-10 on both sides of the freeway. The primary occupant of the corridor is the Devers-Palo Verde 1 500kV transmission line. Devers-Palo Verde 2 is permitted and construction is pending. Many other transmission lines cross the valley as well. Human-made dikes, which have altered the natural topography of the valley's ground plane, have been built to protect the roadway and associated infrastructure from flash floods out of the Chuckwalla Mountains' northern-draining washes.

From this vantage point the immediate foreground is dominated by the trapezoidal form of the freeway and its roadbed. The road's linear extent creates a strongly contrasting horizontal line across the desert floor that visually divides the valley into separate landscape character units. The travel lanes are separated by a 100-foot median with an occasional Ironwood, Palo Verde, or Smoke Tree as well as scattered creosote. Motion tends to attract an observer's attention and motion is a common element along the I-10 corridor. Vehicles have many spectral surfaces and they are at many different angles, introducing the potential for transitory glare and glint especially when the sun is low in the sky. At less than 1 mile from the SR-10 vantage point, two rust-colored monopoles are visible on the southern (right) side of the freeway. These poles will eventually support the gen-tie line for the under-construction Desert Sunlight Solar Project discussed in the SR-1 baseline. Farther into the foreground, roughly a mile distant is Southern California Edison Red Bluff Substation, currently under construction. Its massive electrical infrastructure occupies approximately 80 acres only several hundred feet from the travel-way. Its dominance in this view is accentuated by the steel lattice transmission towers that converge upon it.

This site was visited in the late afternoon and the view is nearly due east. This combination of lighting and atmospheric conditions at the time caused the new, untreated, galvanized steel structures at the substation to exhibit glare when the observer was stationary, as well as, glare and glint from a moving vehicle. Because the entire substation is sky lined from this view, Red Bluff's vertical presence could also be perceived as visually intrusive from SR-10. The architectural concrete wall that surrounds the substation is somewhat visible. The background of the view reveals the lower reaches of the Palen Mountains that can be seen in the right (northern) part of the view, and the McCoy Mountains further in the distance. The foothills of the Mule Mountains are visible in the right (southern) part of the view. This

is a transitory vantage point. Only emergency stopping is allowed on the interstate system and there are no real recreational opportunities in the immediate area of the I-10 and the adjacent utility corridor.

SR – 11 Corn Springs

SR-11 is a vantage point that represents what sensitive receptors would experience from the Corn Springs ACEC near Corn Spring Road. The point is near the point where the receptor would experience the PSEGS project site as they emerge from Corn Spring Canyon. Further west on Corn Springs Road is BLM's popular Corn Springs Campground from which the PSGES project will not be visible because the topography of the canyon constrains its viewshed. The Corn Springs are the allure of this area, which includes a unique assemblage of resources. There is a palm oasis near the campground. Additionally, there are extensive rock art panels and remains of mining activities, which document the prehistoric and historic longevity of the springs' occupation and value to the local indigenous people and early desert explorers.

SR-11 is located in the SW 1/4, NE 1/4, Sec. 27, T6S, R16E of the SBB&M. It is on the northeastern side of Corn Springs Road, high on the bajada, just short of first crossing of Corn Springs Wash. SR-11 is 7 miles from the nearest power tower; the camera azimuth 40° from SR-11 to the PSEGS site.

The baseline visual conditions from SR-11 are described as follows. The immediate foreground is dominated by the sparsely vegetated upper bajada of the desert pavement's planar form. The color of the desert pavement in the Chuckwallas is decidedly more monochromatic than the pavements of the Coxcomb (SR-3 and SR-4) and Eagle mountains (SR-7 and SR-8). This pavement is more uniformly dark brown to nearly black. This could be attributable to more magnesium-rich bedrock as opposed to the iron-rich lithology of the more northern ranges. Upon close examination, the faint trace of what may be construed as a prehistoric trail is a noticeably incongruent feature in the desert pavement. The cleared path continues contiguously for several hundred yards northeasterly, where the trail intersects Corn Springs Road. Trails in the desert pavement are an important diagnostic feature to the area's rich cultural heritage. Corn Springs was an important water feature in the desert environment, exemplified by the many rock art panels in Corn Springs Canyon. This section of trail is interesting in that its line-on-the-ground plane is somewhat sinuous. A photograph of this feature, north of SR-11 near the trail's intersection with Corn Springs Road, is provided in Section 1 of Attachment B (Photo 5). Farther into the foreground, the verdant creosote scrub creates a coarser texture. This green color transitions to a more brown hue as the summer progresses. Most of the middleground, from approximately 3 to 7 miles, is obscured by the topographic screening; this includes I-10 and the adjacent utility corridor. The background is dominated by the Chuckwalla Valley and beyond that the Palen Mountains on the right (east) and the Granite Mountains on the left. Palen Pass separates the two ranges and is an important access route to the Palen McCoy WA and historic places of the Patton era. The jagged line of their silhouette filling the entire view frame creates a memorable viewing experience. The mountains' pyramidal forms are accentuated by the shadows created by the late afternoon sun. The view is very naturally appearing (intact). The composition and the many types of landforms in the view create visual variety and accentuate the sheer magnitude of this vast landscape. The elevation of SR-11 is 1427 feet AMSL, or 852 feet topographically superior to the PSEGS project site.

SR – 12 Chuckwalla Mountains WA

SR-12 is also located near Corn Springs Road northeast of and 2 miles from SR-11. This vantage point is within the Chuckwalla Mountains WA and is located on the extensive bajada on the northeastern slope of the Chuckwalla Mountains. The breadth of the Chuckwalla Valley viewshed from this location is unusual in the landscape. Corn Springs Road is a well-maintained road, easily traversed in a passenger car. This cannot be said for many of the unpaved roads in the valley. However, when one ventures off the road, the bajada's ground plane is dissected by fluvial processes. The desert pavement is still present but less dominant as the slope of the bajada becomes almost imperceptible adjacent to the mountains. The color of the desert varnish in the Chuckwallas is distinctly different than the bajadas of the Eagle or Coxcomb mountains.

SR-12 is located in the NE 1/4, NE 1/4, Sec. 23, T6S, R16E SBB&M. It is located just over 5 miles from the nearest power tower. The camera azimuth for this Chuckwalla WA vantage point is 45°. It is located at an elevation of 1140 feet AMSL, or 595 feet topographically superior to the PSEGS site. Unlike SR-11, the ground plane of the PSEGS site is plainly visible from this vantage point.

The immediate foreground is coarse desert pavement and the dissected bajada beyond. The remainder of the foreground/middelground is topographically screened. In the immediate background are the two parallel lattice towers and extra-high voltage lines and slightly beyond, are the I-10 travel lanes. From this distance and in this lighting, the horizontal lines of the conductors are not discernible to the naked eye. From this vantage point cars are barely discernible because of vegetative screening but the motion of tractor trailers is easily discernible. It is over 3.5 miles from SR-12 to the I-10 corridor and no audio effect of the vehicles on I-10 was discernible during this site visit. Further into the background is the smooth-textured, beige-colored Palen Dry Lake. The crescentic form of the individual dunes gives the dune complex a shadowed texture. The agricultural lands northwest of the project site are barely discernible because the endemic scrub is in its growth cycle, which at this time of year is similar in color to the ornamental trees being cultivated. This condition can be expected to change as the season progresses and the endemic species brown.

The rectangular form of the agricultural field would be more pronounced in other seasons, which would accentuate the incongruent line, form, color, and texture on the Chuckwalla Valley floor. The sand dunes give way to the bajadas of the Palen Mountains, which rise abruptly 2,500 feet above the desert floor. The silhouette of the Palen and Granite mountains in the late afternoon sunlight is dramatic; their pyramidal forms accentuated by the contrast created by shadows. All the mountains discussed in this baseline assessment are unique and distinct ranges unto themselves. Their hue and color saturation change noticeably from different viewing angles and lighting conditions.

SR – 13 I-10 Westbound

Like SR-10, SR-13 is located in the heavily used I-10 corridor. This primary arterial affords viewers the largest number of visual receptors in the Chuckwalla Valley viewshed. Motorists whether commuters or pleasure motorists are not considered a sensitive viewer group. They are traveling at a high rate of speed, so their views of any given landscape element are fleeting. The driver's attention is primarily

focused on safe motoring; passengers, however, are more inclined to observe the landscape they are traversing.

Westbound motorists at this location have just passed the under-construction Genesis Solar Energy Project (GSEP) east of Ford Dry Lake bed. The Genesis project uses parabolic trough technology, which has a considerably lower vertical presence than power towers. The tallest vertical elements at Genesis are its air-cooled condensers (±150 feet). PSEGS proposes similar structures. Genesis is located nearly 3 miles north of the I-10 corridor, so its presence is diminished by distance. Genesis also has 30-foot-tall wind fences with privacy slats to protect the large troughs from wind damage. The two projects PSEGS and GSEP are separated by 9 miles of the Chuckwalla Valley.

SR-13 is located in the SE 1/4, SE 1/4, Sec. 17, T6S, R18E SBB&M. From the vantage point chosen for SR-13 is 6 miles to the nearest power tower on a camera azimuth of 298°.

In the immediate foreground the roadbed's presence is still part of the view toward the PSEGS site. The creosote scrub is uniformly patchy and the sandy-colored, smooth-textured ground plane is plainly visible. The scattered low scrub creates a slightly coarse texture to the view. This vantage point was visited at 5:30 in the afternoon, subsequent to the wind event earlier in the day. However, remaining particulate matter suspended in the atmosphere continued to slightly reduce visual clarity. In the view's middleground, the southern flank of the Palen Mountains is visible. The horizon is defined by the jagged silhouette of the Eagle Mountains, which are mostly contained within the boundary of JTNF. The peaks of the Eagle Mountains are 30 miles distant from SR-13, again displaying the vast nature of the Chuckwalla Valley Viewshed.

SR – 14 Palen Dry Lake

SR-14 was identified by interagency collaboration on the SR selection process because of the presence of cultural resources. After discussing accessibility and the area's use activity with BLM staff, it became clear that the difficult access was problematic for including it in the SR process.

SR – 15 Palen McCoy WA

SR-15 is located in the Palen McCoy WA on the southeastern slope of the Palen Mountains. This vantage point was previously used in the PSPP EIS as a KOP. Access to the site is made somewhat easier by a four-wheel-drive road that allows WA access. SR-15 is approximately 1 mile from the road's end.

The immediate foreground is dominated by the sparsely vegetated slopes of the Palen Mountains and a steep, incised, and sinuous canyon wash that empties on the bajada below. As stated earlier, these discrete, independent mountain ranges are all unique. The Palen's bajada is very dark. This can be attributed to its dark desert pavement, which is influenced strongly by the chemical makeup of the mountains' lithology. Approaching the view's middleground, the dark-colored bajada suddenly transitions to the sand dunes and Palen Dry Lake. These contrasting colors create a noticeable line across the view.

SR – 16 Mule Mountain ACEC

SR-16 was identified by interagency collaboration on the SR selection process because of the presence of cultural resources. After discussing accessibility and the area's use activity with BLM staff, it became clear that the difficult access was problematic for including it in the SR process.

SR – 17 Bradshaw Trail

SR-17 is located at the intersection of the Back Country Byway historically known as the Bradshaw Trail (aka the Gold Road) and Wiley's Well Road. Both of these named geographic features have a long history of travel and survival through the Chuckwalla Valley and beyond. Wells were paramount to the establishment of a trail in the desert environment. The trail was established in 1862 by William David Bradshaw as an overland route to the recently discovered gold fields of La Paz, Arizona. The trail's historical importance is testimony to its federal designation as a Back Country Byway. Wiley's Well was an important watering hole for the stagecoach route. This area is designated by BLM as the Mule Mountains Long Term Visitor Area (LTVA). In the northwestern corner of the intersection of these two well-maintained roads is Willey's Well Campground; one of two developed campgrounds in the LTVA. Dispersed camping is also permitted throughout the LTVA. This is a popular campground for snowbirds, ATV enthusiasts, and rock hounds and is primarily used from September 15 through April 15.

A part of this area's allure, besides the desert solitude and the dark skies, are the geode beds and gem and mineral collection sites along the east-to-west-trending Bradshaw Trail.

The Bradshaw Trial vantage point (SR-17) is located in the SW 1/4, SE 1/4, Sec. 9, T8S, R20E SBB&M. SR-17 is approximately 22 miles from the nearest power tower. The camera azimuth from SR-17 towards the PSEGS site is 308°. The elevation of SR-17 is 589 feet AMSL, or 32 feet topographically superior to the PSGES site. Wiley's Well Road parallels an unnamed sand wash that drains northerly to the endorheic basin that is Ford Dry Lake bed. The characteristic that make the wash unique in the Chuckwalla Valley landscape is the desert riparian habitat corridor the parallels the unnamed wash. The vegetation in the riparian corridor is a multi-storied canopy of medium-sized trees and shrubs. From a visual resources perspective the canopy and the corridor offer a unique desert habitat dichotomy. The corridor transitions abruptly to creosote scrub, so its presence is definable. It also is a formidable vegetative visual obstruction of the viewshed towards the PSEGS site. Many of the campsites at Wiley's Well are adjacent to the corridor, where the viewshed obstruction is most pronounced. The riparian corridor also offers additional recreational opportunity potential for wildlife viewing.

SR-17 is located approximately 800 feet southeast of the canopy, where its presence is less dominant. The foreground is dominated by patchy, relatively tall creosote scrub. The grey sands of the ground plane are decidedly planar in form and exhibit a smooth texture. A ranch-style fence crosses perpendicularly, defining the campground's extent and is the only cultural modification in the view on the azimuth toward the project site. Wiley's Well Campground is hidden from view because it is topographically inferior to SR-17. Further into the foreground, the top of the riparian corridor is visible as a darker green element along the immediate horizon. The entire middleground (<15 miles) is obscured by the vegetative screening. In the background of the view two mountain ranges converge to create a focal landscape in the direction of the PSEGS site. The Chuckwallas are on the left (south) and

the Palens are in the right (north). Only the upper reaches of these ranges are visible from SR-17. The Chuckwallas and Palens rise over 3,600 and 2,900 feet above the valley floor, respectively; over five times the height of the proposed power towers at PSEGS.

1.2 Visual Resources Environmental Consequences

1.2.1 Methodology for Analysis

Potential impacts to visual resources are evaluated through a thorough visual impact analysis. This analysis includes conducting a field visual resource reconnaissance, a photographic survey, reviewing public comments, desktop research, agency coordination, and geographic information systems (GIS) analysis and mapping. Impacts of all project phases are considered when analyzing the visual environment, including: construction, operation, maintenance, and decommissioning.

The entire PSEGS project is located on BLM administered land. Unlike the previously approved Palen Solar Power Project (PSPP) it does not encroach onto private land to the west of the proposed facility. Other changes to the approved certification include:

1. The proposed technology to be utilized for the Modified Project would be two units each with a net generating capacity of up to 250 MW and each consisting of a 750 foot tall solar power tower and receiver, a power block, and a dedicated field of approximately 85,000 heliostats.
2. The Modified Project would include an approximately 15 acre common facilities area, located in the southwestern corner of the site with an administrative/warehouse building and two 2-acre evaporation ponds.
3. An approximately 203 acre temporary construction lay down area located in the southwestern portion of the site immediately north of the common facilities area. This area will be used for lay down of materials, staging of traffic to avoid congestion on the Interstate-10 (I-10)/Corn Springs interchange, and may be the temporary location of the concrete batch plant.
4. The Modified Project includes a slight re-routing of the generation tie-line near the western end of the route and around the newly constructed Red Bluff Substation. The purpose of this re-routing is to align the PSEGS generation tie-line route immediately adjacent to the Desert Sunlight generation tie-line, in order to minimize crossings over I-10 and to ensure easy entry into the Red Bluff Substation nearest the PSEGS breaker position.
5. Elimination of the secondary access road.
6. Re-routing of the redundant telecommunication line along the generation tie-line route.
7. Natural gas delivery from a new extension of the existing Southern California Gas (SoCal Gas) distribution system to the project boundary.

These modifications to the previously certified project proposal represent the following potential environmental consequences from a visual resources perspective, not previously analyzed.

- The proposed technology change will introduce two 750 foot tall power towers. The support towers (towers) will be approximately 620 feet tall. Each tower will serve as a foundation for the 130 foot tall solar receiver steam generator (SRSG), which will be atop the tower. These two

power towers are the most visually pervasive change from the previously certified project proposal, which adds a significant vertical presence to the previous proposal. The other primary project components will be of a similar visual presence as the PSPP proposal. The air-cooled condenser and the heliostat field will be similar to PSPP.

- The SRSG (central receiver) is the primary structure that will influence visual dominance from a visual resources perspective. This feature will be the focal point where the heliostat array will reflect solar incidence. Approximately 85,000, 204 sq. ft. "mirrors" (heliostats) will be focusing the incident sunlight onto the SRSG. This will cause these two project components to glow brightly atop the towers under optimal operating conditions. The amount of glare (diffuse reflection) generated by this concentrated light is theoretical (see Transportation and Public Safety Analysis). The spectral surfaces of the collection system are designed to concentrate sunlight, whereas the SRSG is designed to capture the reflected incident sunlight as thermal energy. The surface of the SRSG will therefore be less spectral than the mirror surfaces. The SRSG will produce diffuse (scattered) reflection. However, the concentration of light directed to the SRSG will introduce two distinct incongruent luminaries into Chuckwalla Valley Viewshed. Their location, from 630-720 feet above the valley floor, means they will have a reddish-brown mountainous backdrop from many positions within the viewshed, which will serve to increase the amount of contrast. Diffuse reflection diminishes more rapidly than spectrally generated reflection and will be less pronounced with increased distance from the project.
- The collection system (heliostat array) will be comprised of extremely spectral surfaces capable of producing significant glare. However, unlike the parabolic trough mirrors of the previous project's collection system, the PSEGS heliostat array will be capable of aiming the reflected sunlight at the PSEGS's SRSG precisely. The previous technology using parabolic mirrors to concentrate sunlight are much more susceptible to producing fugitive glare because of their inherent geometry (see Section 1 of Attachment B). The potential of introducing glare to terrestrial-based receptors will be more apparent when the heliostats are in stowed (horizontal) position or when they are in their transition phase of moving from the late afternoon position to the early morning position. This transitional phase can be assumed to be after the evening sun has set, and the heliostats' ability to concentrate sunlight on the SRSG is minimized, thereby negating the possibility of glare. Glare from the spectral surfaces may also be apparent from the heliostat array when they are positioned to facilitate cleaning, which, given the projects position adjacent to an area of deflation in a sand transport corridor, could be ongoing. See the Project Description and the Heliostat Positioning, Cleaning and Stowing Plan for additional details.
- The air-cooled condensers that the PSEGS project proposes are similar to the PSPP proposal. Similar anthropogenic modifications already exist in the Chuckwalla Valley at the Genesis Solar Energy Project, 9 miles to the east near Ford Dry Lake. Effect mitigation has been deployed that minimizes their contrast and effect on the visual environment.
- The generation tie line (gen-tie) will now parallel the under-construction gen tie for the Desert Sunlight to the Red Bluff Substation. This constitutes co-location, which is a prescribed best management practice (BMP) for VRM.
- The PSEGS will not include the 30 foot tall wind fences required by the parabolic trough technology.

- Landform alteration proposed by the PSPP project will be greatly reduced as will vegetative clearing. Removal of vegetation creates additional ground plane contrast. Ground plane clearing and aggregate 10 foot access roads will be only required for the concentric rings for access to the heliostat array to facilitate construction and cleaning in the operation and maintenance (O&M) phase of the project. This will reduce the potential for fugitive dust being released from disturbed soils.

Visual Contrast Analysis Methods

To analyze impacts the visual resource contrast rating process will be used as authorized by the VRM guidelines in the BLM Handbook H-8431-1. VRM analysis is required as outlined in Washington Office Informational Bulletin 98-135 and Instructional Memorandum 2009-167 which specifically addresses VRM implementation for renewable energy project proposals and the implications of the establishment of solar energy zone (SEZs) on BLM lands. This process is designed to determine if surface disturbing activities or developments will be consistent with the objectives of visual resource management (VRM) classes, or in this case if they meet the intent of adopted interim VRM classes. This is accomplished by filing out Form 8400-4, contrast rating form. This is executed from key observation points (KOPs). KOPs are vantage points on the landscape that occur within the visual viewshed (visual extent) of the proposed project. KOPs are identified by conducting a viewshed delineation using the 3D Analyst extension for ARC GIS. This exercise uses a digital terrain model (DTM) of the areas topography and a three-dimensional model of the proposed development. A target is added to the model that simulates the height of the average potential sensitive receptor (5.5 feet tall). This analysis generates a map delineating from where on the given landscape a visual receptor may be able to see the project components.

What the model does not take into account is the built environment and vegetation. Both of these landscape features can create visual obstructions that may partially or completely obscure (screen) the project components. This landscape has few anthropogenic modifications, such as large or tall buildings that could screen the project from view. However, there is vegetation of various heights that can screen portions of the project, primarily the least tall of the projects components. When in the field, the baseline conditions of the KOPs are documented using the contrast rating form (8400-4).

The KOPs will be rated for the introduced visual contrast created by the PSEGS in a following section.

Visual Simulations of the project are then completed. These products are real-world three dimensional models (wireframes) of the development proposal. Then the wireframes are rendered with materials and ray traced to the specifications of the project. Lighting is added to simulate the effects of shadows based on the time of day the original image of the baseline conditions were photographed. A more detailed explanation of the methods will follow. Section C, Proposed Activity Description, is then completed on form 8400-4. Section D of the form is analyzed in a quantitative matrix of landscape elements and features and the degree of contrast introduced is analyzed. The degree of contrast is characterized as none, weak, moderate, or strong. When there is no degree of contrast between the existing landscape and proposed Project features, the proposed Project features are not visible or perceived. A weak degree of contrast can be seen but does not attract attention. A moderate degree of

contrast begins to attract attention and begins to dominate the characteristic landscape. A strong degree of contrast demands attention, will not be overlooked, and is dominant in the landscape. The completed forms are maintained at the BLM Palm Springs-South Coast Field Office.

The contrast rating process is used to determine if proposed surface disturbing activities and developments will be in compliance with Interim Visual Resource Management Class (IVRM) objectives. The BLM may require additional mitigation or design considerations to achieve the objective of the Class.

1.2.2 Key Observation Point Selection Process

In section 1.1 the 17 identified sensitive receptors (SRs) were introduced and defined. These are vantage points within the landscape that were identified by thorough landscape-level analysis, and a very intensive, transparent vetting process with agency staff and other stakeholders. As stated earlier the physiographic characteristics of this landscape, in conjunction with the large horizontal and vertical profile of the PSEGS proposal, characterize a very large viewshed (838.99 sq. mi.). The entire visual impact threshold distance (VITD) is a 30 mile diameter circle centered on the PSEGS site (3,146.99 sq. miles). Additionally, the potential SRs are diverse and in with some cases visually acute receptors.

This analysis employed a multiple criteria decision analysis matrix to quantitatively identify which of the SR locations were the most visually sensitive. Native American cultural resource concerns were addressed by adding special criteria to address these concerns. The near adjacency of Joshua Tree National Park (JTNP) and its viewshed was further addressed by posting the highest numerical ranking to SR locations inside JTNP in the appropriate criteria. The criteria used to analyze sensitivity were: proximity, duration, and scenic quality of the landscape, plus viewer sensitivity, level of concern, number of viewers, cultural sensitivity, intactness, and perspective. These criteria are quantitatively rated on an ascending scale of 1-5. These criteria are ranked on a landscape level that is specific to the Chuckwalla Valley Viewshed. Table 1.2.2-1 below shows the results of the analysis. The numerical ranking is in the right most column. Some SR locations had equal numerical values and those are preceded by a “T” to indicate a tied score.

Table 1.2.2-1

SR Sensitivity Matrix

Place Name	SR#	Recorded	Proximity	Duration	Scenic Quality	Viewer Sensitivity	Level of Concern	Number of Viewers	Cultural Sensitivity	Intactness	Perspective	Total	Rank
Pinto Wells	1	no											N.R.
Camp Coxcomb	2	yes	3	3	4	3	2	1	1	4	2	**23**	T-9
Coxcomb WA	3	yes	3	3	4	5	5	1	1	4	4	**30**	5
Desert Lily	4	yes	4	3	3	3	3	3	1	3	1	**24**	8
DCAA/CVR	5	yes	3	3	2	2	2	2	1	1	2	**18**	11
Lake Tamarisk	6	yes	3	4	2	2	3	3	1	1	2	**21**	10
Big Wash	7	yes	2	3	4	4	4	2	4	2	4	**29**	6
Dragon Wash	8	yes	2	3	5	4	4	2	5	4	4	**33**	3
Alligator Rock	9	yes	3	3	5	4	4	2	5	3	3	**32**	T-4
I-10 Eastbound	10	yes	4	1	2	2	3	5	1	1	4	**23**	T-9
Corn Springs	11	yes	4	3	5	4	4	3	5	5	4	**37**	1
Corn Springs	12	yes	4	3	4	5	5	2	5	4	4	**36**	2
I-10 Westbound	13	yes	4	1	2	2	3	5	1	1	4	**23**	T-9
Palen Dry Lake	14	no											N.R.
Palen/McCoy WA	15	no	4	3	4	4	4	1	4	4	4	**32**	T-4
Mule Mtns	16	no											N.R.
Bradshaw Trail	17	yes	1	4	4	4	3	4	3	3	2	**28**	7

No in column 2 indicates difficult access or very low visitor use Rank Column - N.R. = Not Rated Rank Column - T = Tie

There was a certain amount of landscape redundancy in the SR locations. For instance, SR-11 received the high sensitivity score but was eliminated because it was on the same azimuth as the view from SR-12. Additionally, topographic screening at SR-11 would obscure the southern portion of the heliostat arrays. Also SR-12 is two miles closer and the entire heliostat array is visible, so SR-12 was used as opposed to SR-11 because it represents a worst-case scenario. Similarly, Desert Lily Sanctuary (SR-4) was on nearly the same camera azimuth the Coxcomb Wilderness Area (WA) so the view of PSEGS would be very similar. Coxcomb WA is part of JTNP and occupies a superior topographic perspective; whereas Desert Lily is topographically inferior and has significant vegetative screening which would obscure the heliostat array and perhaps portions of the other major project components.

The sensitivity matrix ranking elevated nine of the 17 SRs to KOP status. These nine KOPs will be used as the baseline visual conditions for the analysis. The SRs that were elevated to KOPs are KOPs 3, 7, 8, 9, 10, 12, 13, 15, and 17. These points are spatially represented on the Viewshed Delineation Maps in Section 2 of Attachment B. Additionally; these maps show the three viewshed delineation models run for the PSEGS project; one from the top of the power tower (750 feet); from the top of the air-cooled condenser (150 feet); and the top of the heliostat array (12 feet). Also shown on these maps are the boundaries of special land designation including ACECs, WAs, and JTNP.

Close examination of all three of the viewshed delineation maps in Section 2 of Attachment B demonstrate an interesting facet of the Chuckwalla Valley Viewshed's enclosed landscape character. The size of the viewshed for the 12 foot tall heliostat field is not that different than the viewshed of the 750 foot tall power towers. This is exemplified in the list below:

- The viewshed of the30 mile VITD is 3,146.99 sq. mi.
- The viewshed of the project's tallest, most visible component, the power towers, is 838.99 sq. mi. or 26.66% of the VITD sphere.

- The viewshed of the air-cooled condensers (150 feet tall) is 762.20 sq. mi. or 24.22% of the VITD sphere.
- The viewshed of the 12 foot tall heliostat field is 742.06 sq. mi. or 23.58% if the VITD sphere.

Logically, one could assume the 750 foot tall power towers would have a much greater viewshed then the 12 foot. This analysis concludes, and the viewshed delineation maps graphically portray that the power towers only impact slightly over 3% more of the viewshed than does the heliostat array. This is attributable to the PSEGS project site being in a low portion of the valley, the valley's vast extent, and the abrupt and formidable height of surrounding mountainous landscapes which, in addition to providing quality adjacent scenery, provide topographic screening (obstructions) outside the valley itself.

1.2.3 Visual Simulation Methodology

The use of visual simulations is intended to present reasonable representations of an actual viewing experience. Simulations are typically prepared for key viewpoints, also called key observation positions or KOPs, which are selected for detailed analysis.

At each KOP, photographs were taken with a Konica Minolta Dimage A2 (8.2 megapixel) high resolution digital camera equipped with a "normal" focal length equivalent 35mm lens, set to (**50mm**), and the camera tilt (generally horizontal and plumb). When printed on 11-x-17-inch paper, each photograph appears "life-size" when held approximately 18 inches from the eye, resulting in accurate representation of a "normal" view. Because all photographs were taken with the camera's focal length set for a "normal" view, there are no wide-angle or telephoto views, and therefore, no view distortions. Location and viewing direction/angle were recorded at each KOP by use of digital GPS device in conjunction with GIS viewshed delineation data, in order to insure simulation accuracy. The use of a 35mm camera with a 50mm focal length has been the accepted professional standard for creating photographic images that are the equivalent of what is seen by the human eye. By squeezing what the eye can see down to an 8½-x-11-inch page or even an 11-x-17-inch page with two cropped images per page, the landscape features are presented in miniature because the image must be scaled down substantially to fit the page. This may be fine for illustrating the visible field of view but it is not appropriate for the presentation of visual simulations, because the simulation should communicate a reasonable approximation of the actual viewing experience. Landscape features should appear approximately the same scale (size) as if the viewer was standing on location. There should be no visual disconnect between what is seen on a page and what is experienced in the field. Reducing photographs and simulations to fit on 8½-x-11-inch paper understates the prominence of landscape features and conveys a false sense of the project's potential visual impacts.

Because of the stringent methods used to take photographs of existing conditions, the "life-size" characteristics of photographs and simulations, the accuracy provided by placing three-dimensional models of project features into the photographs using AutoCAD and 3DStudio software, and the careful study of topographic maps and aerial photographs, the simulations are accurate and represent reasonable portrayals of expected future conditions upon completion of project implementation.

The design visualization steps taken in the simulation process are described below, within the corresponding software platforms employed. First, the aforementioned digital photography from phase 1, including global positioning system (GPS) and GIS support data is referenced in real-world scale to 3D computer aided design (CAD) platforms (3DStudio &/or AutoCAD) respectively. To ensure a high degree of visual accuracy in the simulations, CAD allows for life-size modeling within the computer. This translates to using real-world scale and dimension to locate and portray facilities/structures and terrain features. Other data utilized to verify simulation precision include: aerial photography in conjunction with USGS topographical quadrangle maps, triangulation, and Google Earth analysis.

AutoCAD & 3D Studio Max Electronic Model Data Integration:

GIS topographical shape file data and aerial photography were initially employed as background references. AutoCAD 3D massing models of the proposed structure locations and orientations were generated based upon CAD data provided by the applicant. Corresponding camera positions and orientations were also recorded in the same 3D coordinate space, according their respective GPS/GIS location data. 3D Studio massing models of the proposed structures and camera locations were generated in real-world scale, distance, and orientation, with respect to each other, including: the GIS topographical terrain data, the aerial photography, and the 3D AutoCAD drawings from which they were referenced.

3D Studio Max Simulation Generation:

To generate the correct view relative to the actual photographs, an electronic camera lens matching the lens that was actually used in the field was placed at its appropriate position in 3D coordinate space, verified with GPS/GIS field support data. A 50mm lens was utilized consistently throughout the design visualization process, resulting in a “normal” view. This lens selection allows for viewing of the 3D model generated above in the same way the project would be viewed in the field. Next, the digital photography from phase 1 was imported into the 3D database and loaded as an environment map, within which the camera view of the 3D model was generated.

From here, the 3D wire frame models of the proposed structures were displayed, along with any significant existing structures, so that proper alignment, scale, angle, and distance could be verified. To complete this phase, the lighting solution was generated, materials and texture mapping were applied, and finally, the composite image was rendered through computer image processing commonly known as ray tracing.

Adobe Photo Shop

Necessary layers were then created within the photography, representing foreground landscape/terrain and background, with respect to the 3D model and its appropriate position within the topography. Once the final composite for the simulated view was completed, additional filters designed to achieve atmospheric conditions such as haze were applied as appropriate.

*Photography data for KOP-15 was provided by AECOM, shot in 12/15/2009, utilizing a Nikon D200 digital camera equipped with a standard 35mm lens.

Visual Impacts to Joshua Tree National Park and BLM Wilderness Areas

The Chuckwalla Valley Viewshed is nearly surrounded by special status lands. Joshua Tree National Park is adjacent to the north and west. Adjacent BLM WAs include: Palen McCoy WA, north and east of the site. The Chuckwalla and Little Chuckwalla Mountains WAs are to the south and east of the site. Their congressional designation as WAs requires that they be designed VRM Class I, the most restrictive from a planning objective. The objectives for Class I are: *To preserve the existing character of the landscape. The level of change to the characteristic landscape should be very low and must not attract attention.* This objective is for the WA only, not the WA's viewshed, which may be surrounded by subordinate Classes that would not preclude more visually intrusive management activities.

WAs are road-less by definition, so access to some of these areas can be arduous. Amenities in these areas are few. BLM's web site describes there form and function:

What Is Wilderness?

Many people use "wilderness" to describe any remote, rugged and undeveloped land. Since passage of the 1964 Wilderness Act, the word has been defined in very specific terms. Only federal land designated by Congress as wilderness, becomes part of the National Wilderness Preservation System. According to the Wilderness Act, federal lands must have certain special characteristics to be considered for wilderness preservation:

1. *They must be in a generally natural condition.*
2. *They must have outstanding opportunities for solitude or a primitive and unconfined type of recreation.*
3. *They must be at least 5,000 acres or large enough to preserve and use as wilderness.*
4. *They may also contain ecological, geological, or other features of scientific, scenic, or historical value.*

Why Wilderness?

- *The purpose of wilderness is "to secure for the American people of present and future generations the benefits of an enduring resource of wilderness .... devoted to the public purposes of recreation, scenic, scientific, educational, conservation, and historical use." (from the Wilderness Act)*
- *The existence of wilderness areas provides assurance that all wild lands will not disappear.*
- *Wilderness areas help to maintain gene pools to provide a diversity of plant and animal life in our world.*
- *Wilderness serves as a unique and irreplaceable "living laboratory" for medical and scientific research.*

Wilderness areas are places of solitude where people can experience freedom from our fast-paced industrialized society. They are places where people can renew the human spirit through association with the natural world. For all its uses, values, and scenic wonders, wilderness is a land heritage that is uniquely American. In the words of Pulitzer-prize-winning novelist Wallace Stegner: "Something will have gone out of us as a people if we ever let the remaining wilderness be destroyed."

The viewshed delineation done for the power towers revealed the percentage of the adjacent wilderness areas that will be visually impacted by the PSEGS projects presence.

Wilderness Area	Percentage Affected by PSGES
Palen/McCoy	49.1%
Chuckwalla Mountains	33.2%
Little Chuckwalla Mountains	31.0%

Joshua Tree National Park is 7.25 miles northeast and 14 miles west of the PSEGS site.

JTNP's web site describes it character thusly:

Joshua Tree National Park is immense, nearly 800,000 acres, and infinitely variable. It can seem unwelcoming, even brutal during the heat of summer when, in fact, it is delicate and extremely fragile. This is a land shaped by strong winds, sudden torrents of rain, and climatic extremes. Rainfall is sparse and unpredictable. Streambeds are usually dry and waterholes are few. Viewed in summer, this land may appear defeated and dead, but within this parched environment are intricate living systems waiting for the opportune moment to reproduce. The individuals, both plant and animal, that inhabit the park are not individualists. They depend on their entire ecosystem for survival.

Two deserts, two large ecosystems primarily determined by elevation, come together in the park. Few areas more vividly illustrate the contrast between "high" and "low" desert. Below 3,000 feet (910 m), the Colorado Desert (part of the Sonoran Desert), occupying the eastern half of the park, is dominated by the abundant creosote bush. Adding interest to this arid land are small stands of spidery ocotillo and cholla cactus.

The higher, slightly cooler, and wetter Mojave Desert is the special habitat of the undisciplined Joshua tree, extensive stands of which occur throughout the western half of the park. According to legend, Mormon pioneers considered the limbs of the Joshua trees to resemble the upstretched arms of Joshua leading them to the promised land.

The viewshed delineation maps show the areas of the Park from where the project will be visible. It shows that from parts eastern foothills of the Eagle Mountains will have unobstructed views of the PSEGS project. In a northeasterly direction there is a narrow view corridor into the Pinto Basin that was described in the Affected Environment Section. In the northerly direction the project site will be visible from the Coxcomb Mountains portion of JTNP. Much of the lands that are impacted by the PSEGS viewshed are part of the Joshua Tree Wilderness Area. The table below documents the percentages of the Park's lands that will be affected.

National Park	Percentage Affected by PSGES
Joshua Tree	4.9%
Joshua Tree WA	11%

1.2.4 Summary of PSPP Mitigation Measures

The PSPP EIS identified these Mitigation Measures to aid in reducing visual impact by reducing contrast.

The implementation of mitigation measures imposed by the Energy Commission as Conditions of Certification for the project also would avoid or reduce impacts on the quality of the human environment. These mitigation measures are summarized here in connection with the impacts they would address, and are set forth in full in Appendix B – APPLICANT PROPOSED MEASURES.

VIS-1, Surface Treatment of Project Structures and Buildings

VIS-2, Re-vegetation of Disturbed Soil Areas

VIS-3, Temporary and Permanent Exterior Lighting

VIS-4, Project Design

TRANS-6, Heliostat Positioning Plan

AQ-SC3, Construction Fugitive Dust Control

AQ-SC4, Dust Plume Response Requirement

BIO-8, Impact Avoidance and Minimization Measures

BIO-22, Decommissioning and Reclamation Plan

BLM-VIS-1, Component Color Treatments

BLM-VIS-2, Consultation with the NPS Night Sky Program Manager

1.2.5 Direct and Indirect Impacts

Proposed Action

There are no indirect impacts of the PSEGS regarding visual resources.

Project Appearance

The proposed action would convert approximately 3,794 acres (5.9 sq. mi.) of naturally appearing desert floor to a utility-scale industrial facility; the most visually pervasive feature of which will be the two 750 foot tall central receivers. The concrete bases of which are approximately 630 feet topped with a 120 foot solar receiver steam generator. The project will consist of two adjacent solar fields (power blocks) and associated facilities each with a nameplate capacity of 250MW. The collection area will occupy most of the land. The collection area will be comprised of two 8.5 by 12 foot heliostats mounted on 1.9 meter pylons with motors that will power the dual axis tracking system to aim the heliostats reflected incident sunlight at the SRSG as they track the sun's apparent movement across the sky. The heliostat array is

precisely placed in concentric circles around the central receiver. Their density decreases with distance from the power tower. A generation tie line (gen-tie) will be exit the western portion of the site, from an on-site electrical substation, till it meets the newly constructed Desert Sunlight gen-tie it will then turn south crossing I-10 to the new Red Bluff Substation. See the Description of Project Amendment for details of the smaller less dominant project features.

Construction Related Impacts

The construction schedule for the PSEGS intends to start construction in September 2013 and finishing in June 2016; or two years and 10 months (34 months) construction window. This schedule is two months shorter than the previous construction schedule for the PSPP. Therefore the construction related impacts will occur over a shorter period of time and be less in magnitude. The construction of the PSEGS project has similar consequences to the PSPP project. In summary the section of the Visual Resources Section of the PSPP EIS identified high degree of visual contrasts which would impact the viewer groups including I-10 motorist, dispersed recreationist in the surrounding WAs and residents of Lake Tamarisk. The visual impacts included: construction night lighting, glare from spectral surfaces, and fugitive dust. Mitigation Measures were AQ-SC3, AQ-SC4, VIS-2, VIS-5, VIS-6, and BIO-24.

Operation Impacts

During the operation phase visual impact will be from the project components of the PSEGS. Some visual effects are not represented in the visual simulations that are used to analyze the project's landscape contrast and will be disclosed first. These include glint and glare, night time lighting, and the phenomena of reflected sunlight.

Light and Glare

Lighting and glare have various levels of effect and different implication. The terms below help clarify their effect and source.

- Artificial sky glow - The brightening of the night sky attributable to human-created sources of light.
- Spill light - Light from a lighting that falls outside of the boundaries of the property or its intended target area.
- Light trespass - Spill light that because of quantitative, directional, or type of light causes annoyance, discomfort, or loss in visual performance and visibility.
- Glint - Light that is reflected at an angle from a spectral surface or light that gives off a reflection in brilliant flashes lasting milliseconds to a few seconds. When it the reflection lasts longer and it is no longer transitory glint becomes glare.
- Glare - Light that causes visual disability, discomfort or a loss of visual performance. The level of glare from purely spectral surfaces (mirrors) can also cause flash blindness. A condition characterized by seeing a grey shadow where the retina has injured by the brightness of the reflected light. Glare can also be categorized as spectral of diffuse. Spectral is typically brighter if the insolence is equal. Diffuse reflection is glare from a reflective surface that is not truly spectral. Diffuse reflection also dissipates more quickly with distance because the light was

scattered at the reflective surface. Extended exposure to glare can great restrict visual clarity reducing contrast making it difficult to see.

Primary objects that can produce glare at PSEGS are the heliostats and the SRSG. The project proponent's largest operating power tower project is in Coalinga, CA. It is a thermal project used to generate steam used for enhance oil recovery by injection. Each of the power blocks proposed here are capable of generating over eight times more energy than that project. The proponent's other power tower project is in Ivanpah, CA. Ivanpah has three central receivers and a generating capacity of 377MW. Ivanpah is still in the testing phase so the level of glare produced by the SRSG at that facility is conjectural. However, the SRSG's at the PSEGS project can be expected to be noticeably more prominent than the less powerful projects.

This defuse reflection generated from the SRSG will introduce two incongruent, noticeable, elevated luminaries (point of diffused illumination) into the Chuckwalla Valley Viewshed. This will be particularly true during periods of maximum solar incidence. The magnitude of the diffuse reflection will be diminished depending on atmospheric clarity. It is also dependent on the amount of airborne particulate matter in the atmosphere and proximity of the receptor to the luminary.

The Palen Dry Lake bed is a distinct physiographic landscape sub-unit within in the Chuckwalla Valley Viewshed. The basin's form, color, sandy texture, sparse vegetation, and interrelated sand dunes define its presence. Wind may cause the lakebed's fine-grained sediments to be driven airborne as suspended atmospheric particulate matter. The atmospheric transport of sediment (Aeolian transport) may produce haze and reduced visibility. Aeolian processes are the geomorphic study of detachment, transport, and deposition of sand, silt, and dust sized sediments by wind (saltation). This erosive process, under certain conditions, can introduce reflective particles into the atmosphere in the vicinity of the PSEGS project site. This condition may create other light related phenomena. These suspended particulates may also act as the nuclei for airborne water vapor condensation.

When saltation events occur, particulate matter (small particles) becomes suspended in the atmosphere. Silica (sand), which can be a specular and may potentially interact with atmospheric moisture and may create infinitely small reflective surfaces in the atmosphere that have the potential to glow. Intensely concentrated of sunlight can reflect off these suspended particles which under certain circumstances and can manifest itself as visible reflected atmospheric light.

The Draft Solar PEIS refers to these phenomena as a "dust particle tent" in its technology specific affects section discussing CSP projects. If this phenomenon were to occur it would make the PSEGS project more visually prominent.

Night Lighting

The PSPP EIS thoroughly described the existing lighting conditions and the measures that would be instituted to minimize the effect. In summary, it described the existing luminaries in the Chuckwalla Valley which are mainly associated with the residential and commercial land uses scattered throughout the privately held parcels, as well as vehicular light on I-10, SR-177 and local roads. It further noted the value of the dark skies in area. The proposed lighting will be hooded, the appropriate color, only where

required, and on motion detecting and on timers which will minimize the potential for sky glow and light trespass. The PSEGS lighting would be subject to the approval of a Lighting Plan per FAA regulations. The PSPP EIS also included Mitigation Measure Vis-3 to further reduce the contrast created by security lighting on-site.

Night Lighting Decommissioning Impacts

As previously documented in the PSPP EIS, the decommissioning phase of the PSEGS is subject to the requirements of the Closure, Re-vegetation and Rehabilitation Plan. From a visual resources perspective, the decommissioning phase will generate similar impacts as identified in the construction phase, but of shorter duration and intensity. However, the PSEGS project, unlike the PSPP project, will not include the level of earthwork and vegetative clearing that were a major component of the previous certification. The PSEGS project will have less profound visual impact on the form of the ground plane because the earthwork (grading) quantities are far less than that proposed by the PSPP project proposal. It will also retain the vegetative over cover in most areas, which will reduce color and texture impacts after the PSEGS's infrastructure has been removed. This will facilitate a more naturally appearing visual condition on the immediately decommissioned landscape. Upon removal of the heliostat field, the PSEGS project will not create form, color and texture contrasts associated with the decommissioning phase of the PSPP project.

The previous certification implemented Mitigation measures VIS-2 and VIS-4, which would aid greatly in reducing the visual effects of decommissioning.VIS-2, BIO-8, and BIO-22 would require the implementation of the Re-vegetation and Rehabilitation Plan. These measures will facilitate the returning the site to its pre-project visual conditions.

1.2.6 Contrast Rating Exercise of PSEGS's KOPs

The baseline visual conditions, the location and a detailed characterization of all the KOPs are provided in the Affected Environment Section of this report. This section discusses the additive effect of the project presence on the Chuckwalla Valley Viewshed. This is based on the visual simulations that were prepared for each of the nine KOPs. To facilitate concise review, each pair of baseline visual conditions and project visual simulations are presented sequentially in Section 4 of Attachment B. The Visual Contrast Rating Worksheets for each KOP are in Appendix A.

In determining whether the proposed action would conform to the assigned VRM class, the four levels of contrast roughly correspond with the four VRM classes. This means that a "strong" contrast rating may be acceptable in an area with VRM Class IV, but probably would not meet the objectives of a VRM Class I, II, or III area. Similarly, a "weak" contrast rating may be acceptable in an area with VRM Class II, but probably would not meet the objectives of a VRM Class I area. The table below shows the correlation between contrast rating and determining whether VRM objectives are met.

Degree of Contrast	VRM Class	Definition
None	Class I Preserve	The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude

		very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention. (This classification is usually applied to wilderness areas, wild and scenic rivers, and other similar situations.)
Weak	Class II Retain	The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
Moderate	Class III Partially Retain	The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
Strong	Class IV Major Modification	The objective of this class is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management 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 through careful location, minimal disturbance, and repeating the basic elements.

The Visual Contrast Rating Worksheet was done as an interdisciplinary team exercise. This is a preferred method and its importance is stressed in the VRM training by BLM through the National Training Center. Each individual will have different experiences, expectations, and insights on utility-scale renewable energy projects. This exercise creates dialogue and shared views. All four of the participants have decades of visual resources experience in many different arenas of the discipline. Two of the participants are registered Landscape Architects. One of the others has attended the BLM VRM training class.

KOP 3-Coxcomb Mountains WA

Location/Receptors

KOP 3 is located in the Coxcomb Mountains in lands managed by JTNP. Additionally, it is located in Joshua Tree WA. The project site is to the southeast of this KOP. This view is characteristic of the view available to dispersed recreationists in JTNP. Visitor use can be expected to be low because of the lack of visitor services and no established or maintained trail networks. It is 9.9 miles from the PPSEGS site and occupies a topographically superior viewing perspective

Sensitivity

Within the Chuckwalla Valley Viewshed, KOP 3 represents the closest sensitive receptor to the PSEGS site from within the boundaries of JTNP. At just under 10 miles, and from a slightly elevated perspective, it looks across the Palen Valley and into the Chuckwalla Valley toward the project location. The view is panoramic and in this direction has a continuous backdrop of the Chuckwalla Mountains. WA. The viewshed of JTNP is highly valued, and this KOP was selected as a result its sensitivity analysis rating. This vantage point possesses high viewer sensitivity, scenic quality, viewer concern, and is characteristic of an intact condition.

Contrast

The contrast rating exercise identified the project effect to produce moderate contrast to the landscape elements of line and form. Weak contrasts were further identified for color and texture. As demonstrated by the visual simulation from KOP 3, the heliostat array is only faintly discernible from this vantage point due to its slightly inferior topographic perspective. The viewer's ability to discern the heliostat field is important, because of its extent and its color contrast with the existing ground plane.

The proposed project as seen from KOP-3 will create moderate visual contrasts of form and line, and weak visual contrasts of color and texture. This equates to a rating somewhere between Class II (retention of landscape character) and Class III (partial retention of landscape character).

Therefore, the proposed project will comply with the definition of Class III, above, as seen from KOP-3 at Coxcomb Mtn. WA in the Joshua Tree National Park.

Mitigation

No additional mitigation measures beyond measures VIS-1, VIS-2, VIS-3, VIS-4, TRANS-6, AQ-SC3, AQ-SC4, BIO-8, BIO-22, BLM-VIS-1 and BLM-VIS-2 are required because of the view from KOP-3 at Coxcomb Mtn. WA in the Joshua Tree National Park.

KOP 7-Big Wash

Location/Receptors

KOP 7 is located in JTNP east of the WA boundary. There is easy access to KOP 7 by Hayfield Road and it occupies a topographically superior viewing perspective. KOP 7 is located 15.5 miles from the PSEGS site and is 850 feet topographically superior. Sensitive receptors would be dispersed recreationists and motorists on lightly used Hayfield Road. Visitor use is expected to be low.

Sensitivity

KOP 7 was elevated to KOP status because of adjacent scenery, viewer concern and scenic quality criteria. The visual resource reconnaissance team was escorted to KOP 7 by a BLM Field Office Archaeologist. He had conducted a prior visit to determine the area's cultural resource potential.

Contrast

The contrast rating exercise revealed this KOP experienced moderate contrast to line and form despite being in the BLM defined seldom seen zone. This zone is beyond the background zone. This is testament to the vast open nature of the Chuckwalla Valley Viewshed and the tower width and formidable vertical presence. The baseline photo was taken shortly after prevailing winds began to blow and the fine

sediments in the valley became suspended particulate matter and noticeably limited the visibility from an hour earlier in the day.

The details of the heliostat field are not visible at this distance. The SRSGs' glow will still be detectable to even the casual observer. The color and texture of the PSEGSs created weak contrast but was still a discernible landscape feature and could be more contrasting during days with better atmospheric visibility.

The simulations do not show any glare but the phenomena may occur as reflected sunlight strikes heliostats that are stowed or being cleaned. This glare would be brighter and more specular than the glare from the SRSG. If this were to occur from this topographically superior position it would attract attention.

The proposed project as seen from KOP-7 will create moderate visual contrasts of form and line, and weak visual contrasts of color and texture. This equates to a rating somewhere between Class II (retention of landscape character) and Class III (partial retention of landscape character).

Therefore, the proposed project will comply with the definition of Class III, above, as seen from KOP-7 at Big Wash in Joshua Tree National Park.

Mitigation

No additional mitigation measures beyond measures VIS-1, VIS-2, VIS-3, VIS-4, TRANS-6, AQ-SC3, AQ-SC4, BIO-8, BIO-22, BLM-VIS-1 and BLM-VIS-2 are required because of the view from KOP-7 at Big Wash in Joshua Tree National Park

KOP 8-Dragon Wash

Location/Receptors

KOP 8 is located within JTNP, approximately a mile from the JTNP WA. KOP 8 is 15.9 miles from the PSEGS site. The elevation of KOP 8 is 1,390 feet AMSL, or 803 feet topographically superior to the PSEGS project site. The camera azimuth from KOP 8 is 100°. The nearest power tower is 16.2 miles from potential sensitive receptors at Dragon Wash (KOP 8). Receptors in this area are primarily dispersed recreationists and those with interests in archaeology.

Sensitivity

KOP-8 is culturally significant. There are several well preserved prehistoric rock art panels and historically pecked rocks. Dragon Wash was more hospitable than Big Wash in that the terrain was less jumbled and the presence of ironwood trees softens the desert landscape.

Contrast

KOP 8 is a very similar view to KOP 7 located in JTNP; KOP 8 is four miles southwest of KOP 8. The contrast rating exercise produced similar results and conclusions; moderate contrast in form and line and weak contrast in color and texture.

This equates to a rating somewhere between Class II (retention of landscape character) and Class III (partial retention of landscape character).

Therefore, the proposed project will comply with the definition of Class III, above, as seen from KOP-8 at Dragon Wash in Joshua Tree National Park.

Mitigation

No additional mitigation measures beyond measures VIS-1, VIS-2, VIS-3, VIS-4, TRANS-6, AQ-SC3, AQ-SC4, BIO-8, BIO-22, BLM-VIS-1 and BLM-VIS-2 are required because of the view from KOP 8 at Big Wash in Joshua Tree National Park.

KOP 9-Alligator Rock (ACEC)

Location/Receptors

KOP 9 is located within public land administered by the BLM and managed to protect significant prehistoric resources in the area. There are pictographs and lithic procurement areas. The ACEC is 7,726 acres in size; the most notable landscape feature is the local landmark known as Alligator Rock.

Sensitivity

KOP 9 is culturally significant; it is also a part of Desert Center's historical fabric. Stephen Ragsdale, the outpost's founder and patriarch, is rumored to have retreated to a place at the northern end of the formation to write his poetic musings, which were sold at the gas station and published in local publications.

Contrast

The topographic screening at KOP 9 obscures a considerable portion of the PSEGS site. Additively, the creosote scrub and small ironwood trees provide additional vegetative screening. The contrast rating exercise conducted for KOP 9 provided these results: weak visual contrasts of form, line, color, and texture. This equates to a rating of VRM Class II (retention of landscape character).

Therefore, the proposed project will comply with the definition of Class III, above, as seen from KOP-9 at Alligator Rock ACEC (BLM).

Mitigation

No additional mitigation measures beyond measures VIS-1, VIS-2, VIS-3, VIS-4, TRANS-6, AQ-SC3, AQ-SC4, BIO-8, BIO-22, BLM-VIS-1 and BLM-VIS-2 are required because of the view from KOP-9 at Alligator Rock ACEC (BLM).

KOP 10-I-10 Eastbound

Location/Receptors

KOP 10 is located along the heavily traveled I-10 transportation corridor. KOP 10 is located 6.4 miles from the nearest power tower with a camera azimuth of 98°or slightly south of east. The elevation of the vantage point is 810 feet AMSL, or 227 feet topographically superior to the PSEGS project site.

Sensitivity

This KOP was chosen based on the sensitivity matrix because most people enjoying the views of the Chuckwalla Valley Viewshed use this corridor. It affords sweeping panoramic views of the Chuckwalla Valley and the distinct mountain ranges that encircle it.

Contrast

From KOP 10 on eastbound I-10, the PSEGS project becomes more apparent because of the closer distance. The PSEGS site is located in the background from this vantage point. Details of the project are discernible. Although the heliostat field is screened from view at this vantage point, the tops of the air-cooled condensers are visible as well as over 600 feet of the power tower concrete base and SRSG. The cylindrical form of the power tower becomes apparent. This view has many anthropogenic modifications. There is co-dominance with the substation and transmission line towers, all with a large vertical presence.

The contrast rating exercise for KOP 10 identified a strong contrast with the element line; a moderate contrast in form, and weak contrast with texture and color. This can be directly attributable to the screened heliostat array.

The two power towers will protrude above the horizon and will attract attention and produce strong "line" contrasts directly in the cone of vision of eastbound I-10 travelers. Cylindrical form contrasts are moderate, and color and texture contrasts are weak as seen from KOP-10. The two visible power towers will create a major modification of the existing character of the Chuckwalla Valley as seen from the freeway. The proposed project will be a new dominant feature of the landscape visible for miles along the freeway. The project will change the character of the area, and will dominate the view and become the major focus of viewer attention as seen from KOP-10.

The visual character of this portion of the desert will become more developed because of the new Red Bluff Substation and the newly visible power towers. The overall visual impact of the proposed project will continue to convert this to an industrialized solar-electric landscape. However, some viewers may see the development of a solar resource facility as a point of positive visual interest. Taken as a whole, visual impacts to KOP-10 resulting from the proposed project are expected to be significant and immitigable, per BLM VRM standards, guidelines, and best management practices (BMPs).

There are no reasonable or feasible mitigation measures that could be applied that would reduce the visual contrast of the two 750 foot tall power towers protruding above the horizon. Vegetative screening and/or architectural screening of these features is impractical, if not impossible.

Mitigation

No additional mitigation measures beyond measures VIS-1, VIS-2, VIS-3, VIS-4, TRANS-6, AQ-SC3, AQ-SC4, BIO-8, BIO-22, BLM-VIS-1 and BLM-VIS-2 are required because of the view from KOP-10 at Interstate 10 Eastbound.

KOP 12-Chuckwalla Mountains WA

Location/Receptors

This vantage point is within the Chuckwalla Mountains WA and is located on the extensive bajada on the northeastern slope of the Chuckwalla Mountains. The breadth of the Chuckwalla Valley viewshed from this location is unusual in the landscape. KOP 12 is located in the NE 1/4, NE 1/4, Sec. 23, T6S, R16E SBB&M. It is located just over five miles from the nearest power tower. The camera azimuth for this

Chuckwalla WA vantage point is 45°. It is located at an elevation of 1,140 feet AMSL, or 595 feet topographically superior to the PSEGS site. Unlike KOP 11, the ground plane of the PSEGS site is plainly visible from this vantage point

Sensitivity

KOP 12 was elevated to KOP status because of it elevated position and dramatic northern views. It also affords an unobstructed view of the PSEGS site. This area is culturally important because of the prehistoric trails and cleared circles on the bajada. It also is in the vicinity of an important water source, Corn Springs.

Contrast

The strong contrasts of form, line, and color created by the proposed project will create a major modification of the existing character of the Chuckwalla Valley and Palen Dry Lake as seen against the backdrop of the Palen Mountains. The proposed project will be a new dominant feature of the landscape visible from travel routes and use areas in the viewshed. The project will change the existing visual character of the viewshed. The two 750-foot-tall solar power towers are the most visually noticeable elements, and from this view at KOP-12, the heliostat fields are highly visible too. The project will change the character of the area, and will dominate the view and become the major focus of viewer attention as seen from KOP-12.

The visual character of Palen Dry Lake will change from open space desert to that of a developed landscape. The overall visual impact of the proposed project is expected to completely alter the existing undeveloped scenic quality of this naturally evolving landscape, and convert it to an industrialized solar-electric landscape. However, some viewers may see the development of a solar resource facility as a point of positive visual interest. Taken as a whole, visual impacts to KOP-12 resulting from the proposed project are expected to be significant and immitigable, per BLM VRM standards, guidelines, and best management practices (BMPs).

There are no reasonable or feasible mitigation measures that could be applied that would reduce the visual contrast of the two 750 foot tall power towers, the elevated air cooled condensers, or the expansive and highly reflective heliostat fields. Vegetative screening and/or architectural screening of these features is impractical, if not impossible.

Mitigation

No additional mitigation measures beyond measures VIS-1, VIS-2, VIS-3, VIS-4, TRANS-6, AQ-SC3, AQ-SC4, BIO-8, BIO-22, BLM-VIS-1 and BLM-VIS-2 are required because of the view from KOP 12-Chuckwalla Mountains WA.

KOP 13 I-10 Westbound

Location/Receptors

KOP 13 is from westbound I-10, 6.4 miles from the PSEGS site. It occupies a normal perspective of the landscape of the Chuckwalla Valley. Most visual receptors in the valley have views from this corridor.

Sensitivity

This KOP was chosen based on the sensitivity matrix because most people enjoying the views of the Chuckwalla Valley Viewshed use this corridor. It affords sweeping panoramic views of the Chuckwalla Valley and the distinct mountain ranges that encircle it.

Contrast

The two power towers will protrude above the horizon and will attract attention and produce strong "line" contrasts. Form contrasts are moderate, and color and texture contrasts are weak as seen from the westbound freeway. The two visible power towers will create a major modification of the existing character of the Chuckwalla Valley as seen from the freeway. The proposed project will be a new dominant feature of the landscape visible for miles along the freeway. The project will change the character of the area, and will dominate the view and become the major focus of viewer attention as seen from KOP-13.

The visual character of this portion of the desert will change from open space to that of a developed landscape. The overall visual impact of the proposed project is expected to strongly alter the existing undeveloped scenic quality of this naturally evolving landscape, and convert it to an industrialized solar-electric landscape. However, some viewers may see the development of a solar resource facility as a point of positive visual interest. Taken as a whole, visual impacts to KOP-13 resulting from the proposed project are expected to be significant and immitigable, per BLM VRM standards, guidelines, and best management practices (BMPs).

There are no reasonable or feasible mitigation measures that could be applied that would reduce the visual contrast of the two 750 foot tall power towers protruding above the horizon. Vegetative screening and/or architectural screening of these features is impractical, if not impossible.

Mitigation

No additional mitigation measures beyond measures VIS-1, VIS-2, VIS-3, VIS-4, TRANS-6, AQ-SC3, AQ-SC4, BIO-8, BIO-22, BLM-VIS-1 and BLM-VIS-2 are required because of the view from KOP 13-Interstate-10 Westbound.

KOP-15 Palen McCoy WA

Location/Receptors

KOP 15 is in the Palen McCoy WA approximately 6.1 miles from the PSEGS site. The image was captured in 2010 by AECOM and the vantage point was used as a KOP in the PSPP EIS. The elevation is the vantage point is 1,502 AMSL and provides an excellent perspective of the southern Chuckwalla Valley. This vantage point is one mile from an access road into the WA. Receptors would be dispersed recreationists seeking solitude and vistas.

Sensitivity

This SR was elevated to KOP status for scoring high numbers for viewer concern, scenic quality, and intactness in the sensitivity matrix.

Contrast

The strong contrasts of form, line, and color created by the proposed project will create a major modification of the existing character of the Chuckwalla Valley and Palen Dry Lake, as seen against the backdrop of the Chuckwalla Mountains. The proposed project will be a new dominant feature of the landscape visible from this WA. The project will change the existing visual character of the viewshed. The two 750-foot-tall solar power towers are the most visually noticeable elements, and from this view at KOP-15, the elevated air cooled condensers and heliostat fields are highly visible too. The project will change the character of the area, and will dominate the view and become the major focus of viewer attention as seen from KOP-15.

The visual character in the area of Palen Dry Lake will change from open space desert to that of a developed landscape. The overall visual impact of the proposed project is expected to completely alter the existing undeveloped scenic quality of this naturally evolving landscape, and convert it to an industrialized solar-electric landscape. However, some viewers may see the development of a solar resource facility as a point of positive visual interest. Taken as a whole, visual impacts to KOP-15 resulting from the proposed project are expected to be significant and immitigable, per BLM VRM standards, guidelines, and best management practices (BMPs). Therefore, the proposed project will not comply with the definition of Class III, above, as seen from KOP-15 in the Palen / McCoy Wilderness Area, but rather, will equate to a rating of VRM Class IV.

There are no reasonable or feasible mitigation measures that could be applied that would reduce the visual contrast of the two 750 foot tall power towers, the elevated air cooled condensers, or the expansive and highly reflective heliostat fields. Vegetative screening and/or architectural screening of these features is impractical, if not impossible.

Mitigation

No additional mitigation measures beyond measures VIS-1, VIS-2, VIS-3, VIS-4, TRANS-6, AQ-SC3, AQ-SC4, BIO-8, BIO-22, BLM-VIS-1 and BLM-VIS-2 are required because of the view from KOP-15 Palen McCoy WA.

KOP-17 Bradshaw Trail

Location/Receptors

The Bradshaw Trail's vantage point (SR-17) is located in the SW 1/4, SE 1/4, Sec. 9, T8S, R20E SBB&M. SR-17 is 22.8 miles from the nearest power tower. The camera azimuth from KOP 17 towards the PSEGS site is 308°. The elevation of KOP 17 is 589 feet AMSL, or 32 feet topographically superior to the PSGES site.

Sensitivity

KOP 17 is located at the intersection of the Back Country Byway historically known as the Bradshaw Trail (aka the Gold Road) and Wiley's Well Road. Both of these named geographic features have a long history of travel and survival through the Chuckwalla Valley and beyond.

Contrast

The Proposed Project is not visible from KOP 17.

Mitigation

No mitigation is required for KOP 17.

1.2.7 Cumulative Impacts

Impacts resulting from construction, operation, maintenance, and decommissioning of the project could result in a cumulative effects on visual resources with other past, present, or reasonably foreseeable future actions within the Chuckwalla Valley Viewshed and the larger Riverside East SEZ. The FSA and EIS for the previous project proposal, PSPP, which has been incorporated by reference, identified unavoidable and adverse cumulative impacts.

The additive effects of the PSEGS proposal is considered synergistic to the other applications because the choice of technology being deployed is not present or proposed at other projects. The seven renewable energy applications in the SEZ are not static. Ownership and subsequent technology changes because of industry dynamics have required additional environmental review. These dynamics could be construed to continue. However, the approximately 50 miles between Desert Center and Blythe, CA is potentially the highest concentration of renewable energy proposals included in the Solar PEIS. The PEIS identified the impacts to special land use designations thusly: “The potential solar development areas, in combination, would be within the 15-mile viewshed of 14 percent of JTNP, 16 percent of the Joshua Tree Wilderness, 57 percent of the Chuckwalla Mountain Wilderness, 58 percent of the Little Chuckwalla Mountains Wilderness, and 76 percent of the Palen-McCoy Wilderness (Solar PEIS, 2010).” Given the PSEGS’s greater presence these percentages could be expected to increase.

The status of renewable energy applications within the Chuckwalla Valley Viewshed and the larger Riverside East SEZ has not changed appreciably since the PSPP project’s certification. Project proposals’ viability is subject to conjecture, but none of the current applications has been withdrawn.

Given the PSEGS more dominant vertical presence, and consequently the expanded viewshed, similar conclusions are similarly drawn for the PSEGS project proposal and this amendment. Mitigation measures proposed would not significantly reduce the cumulative impacts. The PSEGS contribution to additive contrast created by industrialization of the area is considered cumulatively considerable.

Appendix A: Visual Contrast Rating Worksheets

Form 8400 - 4
(September 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date 4/21/2013

District Palm Springs - South Coast

Resource Area Chuckwalla - Palen

Activity (program) Solar Energy

SECTION A. PROJECT INFORMATION

1. Project Name
Palen Solar Electric Generating System (PSEGS)

2. Key Observation Point
KOP 3 Coxcomb WA (JTNP)

3. VRM Class
VRI Class III
VRM Class (Not disclosed by BLM)

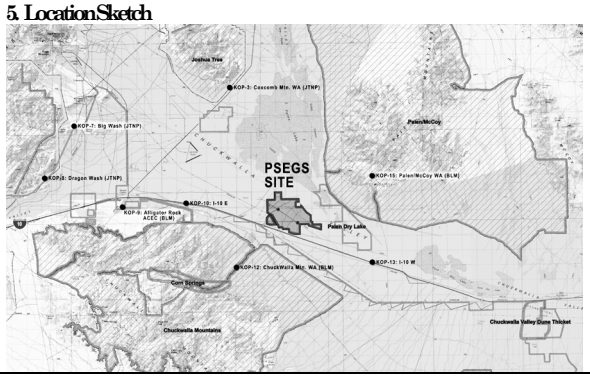
4. Location

Township 5 South

Range 17 E

Section Multiple Sections

5. Location Sketch



SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Planar, gently sloping ground plane, flat dry lakebed, faintly pyramidal mountains in the background.	Rounded irregular scrub and small trees	Trapezoidal roadbed and cylindrical power line wood poles cross the view in the foreground.
LINE	Horizontal lines of vehicle tracks in foreground. Sinuous line of small wash in foreground. Jagged line of mountains in background.	Irregular but distinct horizontal line where scrub gives way to dry lakebed. Dark diagonal line of agriculture in background.	Faint horizontal and vertical lines of road and electrical poles. Intermittently visible horizontal lines of conductors.
COLOR	Beige, light brown mottled ground plane. Distinct change sand color in middleground.	Relatively green to grey-green creosote scrub. More verdant green approaching dry lakebed.	Grey asphalt roadbed. Dark brown utility poles. Faint silver grey conductors.
TEXTURE	Slightly coarse foreground, smooth flat middleground. Very smooth dry lakebed	Medium coarse random foreground. Gradation to more ordered continuous middleground. Smooth texture in dry lakebed.	Smooth textured road and wood poles.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

It is approximately 10.0 miles from KOP-3 to the center of the proposed project (Background distance zone)

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	No change.	No change.	Two power towers create new vertical cylindrical forms and two elevated air cooled condensers create rectangular forms approximately 10.0 miles away in the background distance zone.
LINE	No change.	No change.	Two power towers create new vertical lines that barely intersect the horizon of the background mountains. Two elevated air cooled condensers create horizontal lines at the base of the towers.
COLOR	No change.	No change.	Two power towers and two elevated air cooled condensers are medium grey at this distance.
TEXTURE	No change.	No change.	Two power towers and two elevated air cooled condensers are smooth textured.

SECTION D. CONTRAST RATING ☐ SHORT TERM X LONG TERM

1. DEGREE OF CONSTRAST		FEATURES											
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)			
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
ELEMENTS	Form				X				X		X		
	Line				X				X		X		
	Color				X				X			X	
	Texture				X				X			X	

2. Does project design meet visual resource management objectives? X Yes ☐ No (Explain on reverse side)

3. Additional mitigating measures recommended? ☐ Yes X No (Explain on reverse side)

Evaluator's Names **Date**
Lee Roger Anderson, CA LLA#1586 **5/23/2013**
Peter Langenfeld
Timothy R Zack
Thomas Cherry, PLA, ASLA

SECTION D. (Continued)

Comments from item 2.
The BLM did not respond in a timely manner to a request for a management decision on the final adopted Visual Resource Management Class (VRM Class) or the Interim Visual Resource Management Class (IVRM) designations for the project area. For this analysis, we had to move forward using the presumption that the Visual Resource Inventory Class (VRI Class) has been adopted as the VRM Class. The VRI Class for this area is III.

In determining whether the proposed action would conform to the assigned VRM class, the four levels of contrast roughly correspond with the four VRM classes. This means that a "strong" contrast rating may be acceptable in an area with VRM Class IV, but probably would not meet the objectives of a VRM Class I, II, or III area. Similarly, a "weak" contrast rating may be acceptable in an area with VRM Class II, but probably would not meet the objectives of a VRM Class I area. The table below shows the correlation between contrast rating and determining whether VRM objectives are met.

Degree of Contrast	VRM Class	Definition
None	Class I Preserve	The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention. (This classification is usually applied to wilderness areas, wild and scenic rivers, and other similar situations.)
Weak	Class II Retain	The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
Moderate	Class III Partially Retain	The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
Strong	Class IV Major Modification	The objective of this class is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management 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 through careful location, minimal disturbance, and repeating the basic elements.

The proposed project as seen from KOP-3 will create moderate visual contrasts of form and line, and weak visual contrasts of color and texture. This equates to a rating somewhere between Class II (retention of landscape character) and Class III (partial retention of landscape character).

Therefore, the proposed project will comply with the definition of Class III, above, as seen from KOP-3 at Coxcomb Mtn. WA in the Joshua Tree National Park.

Additional Mitigating Measures (See item 3)

The PSPP EIS identified these Mitigation Measures to aid in reducing visual impact by reducing contrast.

The implementation of mitigation measures imposed by the Energy Commission as Conditions of Certification for the project also would avoid or reduce impacts on the quality of the human environment. These mitigation measures are summarized here in connection with the impacts they would address, and are set forth in full in Appendix B – APPLICANT PROPOSED MEASURES.

VIS-1, Surface Treatment of Project Structures and Buildings

VIS-2, Re-vegetation of Disturbed Soil Areas

VIS-3, Temporary and Permanent Exterior Lighting

VIS-4, Project Design

TRANS-6, Heliostat Positioning Plan

AQ-SC3, Construction Fugitive Dust Control

AQ-SC4, Dust Plume Response Requirement

BIO-8, Impact Avoidance and Minimization Measures

BIO-22, Decommissioning and Reclamation Plan

BLM-VIS-1, Component Color Treatments

BLM-VIS-2, Consultation with the NPS Night Sky Program Manager

No additional mitigation measures beyond these are required because of the view from KOP-3 Coxcomb WA (JTNP).

U.S. GOVERNMENT PRINTING OFFICE: 1985-461-988/33094

Form 8400 - 4
(September 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date 4/23/2013

District Palm Springs - South Coast

Resource Area Chuckwalla - Palen

Activity (program) Solar Energy

SECTION A. PROJECT INFORMATION

1. Project Name
Palen Solar Electric Generating System (PSEGS)

2. Key Observation Point
KOP 7 Big Wash (JTNP)

3. VRM Class
VRI Class III
VRM Class (Not disclosed by BLM)

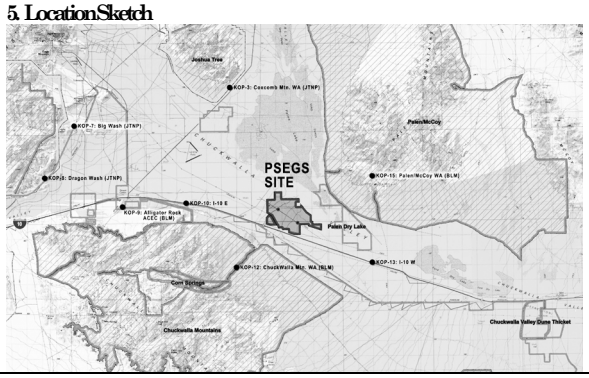
4. Location

Township 5 South

Range 17 E

Section Multiple Sections

5. Location Sketch



SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Incised drainage rills of Big Wash in the foreground. Planar, gently sloping ground plane in the middleground, with jagged triangular forms of pyramidal mountains in the background.	Rounded irregular creosote scrub and more vertical small trees in foreground. Gradating to indistinguishable forms with a rectangular area of residential vegetation in the distance.	Rectangular form of Lake Tamarisk.
LINE	Random drainage lines. Strong horizontal line at elevation change. Complex broken lines in foreground.	Distinct horizontal line of ornamental vegetation at Lake Tamarisk.	No apparent structure. Buildings at Lake Tamarisk are indistinguishable.
COLOR	Beige, light brown mottled ground plane. Becoming more consistent medium brown in the distance.	Relatively green to grey-green creosote scrub. Distinct dark green band of evergreen trees at Lake Tamarisk.	No apparent structure. Buildings at Lake Tamarisk are indistinguishable because of evergreen tree screening.
TEXTURE	Coarse jumbled random rocks and boulders in the foreground, smooth flat middleground. Stippled in the background	Medium coarse random foreground. Gradation to more ordered continuous middleground and background.	No apparent structure. Buildings at Lake Tamarisk are indistinguishable.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

It is approximately 15.5 miles from KOP-7 to the center of the proposed project (Seldom Seen distance zone)

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	No change.	No change.	Two power towers create new vertical cylindrical forms and two elevated air cooled condensers create rectangular forms approximately 15.5 miles away (in the seldom seen area, beyond the background distance zone, as defined by the BLM).
LINE	No change.	No change.	Two power towers create new vertical lines. Two elevated air cooled condensers create horizontal lines at the base of the towers.
COLOR	No change.	No change.	Two power towers and two elevated air cooled condensers are medium grey at this distance.
TEXTURE	No change.	No change.	Two power towers and two elevated air cooled condensers are smooth textured.

SECTION D. CONTRAST RATING ☐ SHORT TERM X LONG TERM

1. DEGREE OF CONSTRAST		FEATURES											
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)			
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
ELEMENTS	Form				X				X		X		
	Line				X				X		X		
	Color				X				X			X	
	Texture				X				X			X	

2. Does project design meet visual resource management objectives? X Yes ☐ No (Explain on reverse side)

3. Additional mitigating measures recommended? ☐ Yes X No (Explain on reverse side)

Evaluator's Names **Date**
Lee Roger Anderson, CA LLA#1586 **5/23/2013**
Peter Langenfeld
Timothy R Zack
Thomas Cherry, PLA, ASLA

SECTION D. (Continued)

Comments from item 2.
The BLM did not respond in a timely manner to a request for a management decision on the final adopted Visual Resource Management Class (VRM Class) or the Interim Visual Resource Management Class (IVRM) designations for the project area. For this analysis, we had to move forward using the presumption that the Visual Resource Inventory Class (VRI Class) has been adopted as the VRM Class. The VRI Class for this area is III.

In determining whether the proposed action would conform to the assigned VRM class, the four levels of contrast roughly correspond with the four VRM classes. This means that a "strong" contrast rating may be acceptable in an area with VRM Class IV, but probably would not meet the objectives of a VRM Class I, II, or III area. Similarly, a "weak" contrast rating may be acceptable in an area with VRM Class II, but probably would not meet the objectives of a VRM Class I area. The table below shows the correlation between contrast rating and determining whether VRM objectives are met.

Degree of Contrast	VRM Class	Definition
None	Class I Preserve	The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention. (This classification is usually applied to wilderness areas, wild and scenic rivers, and other similar situations.)
Weak	Class II Retain	The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
Moderate	Class III Partially Retain	The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
Strong	Class IV Major Modification	The objective of this class is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management 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 through careful location, minimal disturbance, and repeating the basic elements.

The proposed project as seen from KOP-7 will create moderate visual contrasts of form and line, and weak visual contrasts of color and texture. This equates to a rating somewhere between Class II (retention of landscape character) and Class III (partial retention of landscape character).

Therefore, the proposed project will comply with the definition of Class III, above, as seen from KOP-7 at Big Wash in Joshua Tree National Park.

Additional Mitigating Measures (See item 3)

The PSPP EIS identified these Mitigation Measures to aid in reducing visual impact by reducing contrast.

The implementation of mitigation measures imposed by the Energy Commission as Conditions of Certification for the project also would avoid or reduce impacts on the quality of the human environment. These mitigation measures are summarized here in connection with the impacts they would address, and are set forth in full in Appendix B – APPLICANT PROPOSED MEASURES.

VIS-1, Surface Treatment of Project Structures and Buildings

VIS-2, Re-vegetation of Disturbed Soil Areas

VIS-3, Temporary and Permanent Exterior Lighting

VIS-4, Project Design

TRANS-6, Heliostat Positioning Plan

AQ-SC3, Construction Fugitive Dust Control

AQ-SC4, Dust Plume Response Requirement

BIO-8, Impact Avoidance and Minimization Measures

BIO-22, Decommissioning and Reclamation Plan

BLM-VIS-1, Component Color Treatments

BLM-VIS-2, Consultation with the NPS Night Sky Program Manager

No additional mitigation measures beyond these are required because of the view from KOP-7 at Big Wash (JTNP).

U.S. GOVERNMENT PRINTING OFFICE: 1985-461-988/33094

Form 8400 - 4
(September 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date 4/24/2013

District Palm Springs - South Coast

Resource Area Chuckwalla - Palen

Activity (program) Solar Energy

SECTION A. PROJECT INFORMATION

1. Project Name
Palen Solar Electric Generating System (PSEGS)

2. Key Observation Point
KOP 8 Dragon Wash (JTNP)

3. VRM Class
VRI Class III
VRM Class (Not disclosed by BLM)

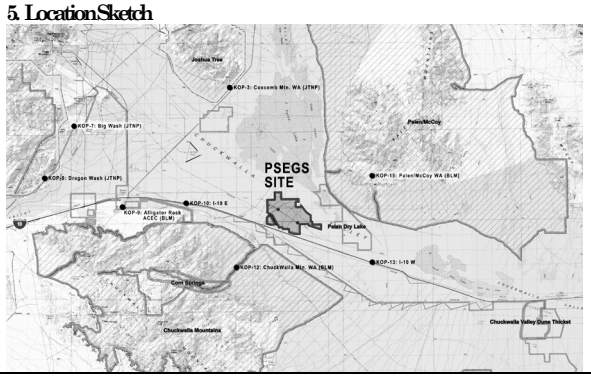
4. Location

Township 5 South

Range 17 E

Section Multiple Sections

5. Location Sketch



SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Jumbled rugged complex rock shoulder transitioning to flat, gently sloping ground plane. Jagged triangular forms of pyramidal mountains in the background	Rounded irregular creosote scrub and irregular small trees in foreground. Gradating to a closed carpet of creosote scrub on the middleground and background plane .	Three sagging transmission line conductors cross the sky and desert plane in the foreground/middleground
LINE	Complex random line of boulder in foreground. Strong horizontal line of desert plane in foreground/middleground, extending to background.	Weak horizontal banding of vegetation in middleground.	Horizontal line of transmission line conductors
COLOR	Brown rocks and tan colored sand in foreground and blue grey mountains in the background.	Green to grey-green creosote scrub. Distinct dark green band of color in middleground becoming indistinct farther away	Black to dark grey transmission line conductors.
TEX-TURE	Coarse textured rockforms in the foreground, mottled texture flat middleground, stippled on the background plane. Smooth textured mountains at horizon.	Medium coarse random foreground. Gradation to more ordered continuous and medium texture in middleground and background.	Smooth textured transmission line conductors

SECTION C. PROPOSED ACTIVITY DESCRIPTION

It is approximately 16.0 miles from KOP-8 to the center of the proposed project (Seldom Seen distance zone).

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	No change.	No change.	Two power towers create new vertical cylindrical forms and two elevated air cooled condensers create rectangular forms approximately 16.0 miles away (in the seldom seen area, beyond the background distance zone, as defined by the BLM)
LINE	No change.	No change.	Two power towers create new vertical lines and two elevated air cooled condensers create horizontal lines at the base of the towers..
COLOR	No change.	No change.	Two power towers and two elevated air cooled condensers are medium grey at this distance.
TEX-TURE	No change.	No change.	Two power towers and two elevated air cooled condensers are smooth textured.

SECTION D. CONTRAST RATING ☐ SHORT TERM X LONG TERM

1. DEGREE OF CONSTRAST		FEATURES											
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)			
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
ELEMENTS	Form				X				X		X		
	Line				X				X		X		
	Color				X				X			X	
	Texture				X				X			X	

2. Does project design meet visual resource management objectives? X Yes ☐ No (Explain on reverse side)

3. Additional mitigating measures recommended? ☐ Yes X No (Explain on reverse side)

Evaluator's Names **Date**
Lee Roger Anderson, CA LLA #1586 **5/23/2013**
Peter Langenfeld
Timothy R Zack
Thomas Cherry, PLA, ASLA

SECTION D. (Continued)

Comments from item 2.
The BLM did not respond in a timely manner to a request for a management decision on the final adopted Visual Resource Management Class (VRM Class) or the Interim Visual Resource Management Class (IVRM) designations for the project area. For this analysis, we had to move forward using the presumption that the Visual Resource Inventory Class (VRI Class) has been adopted as the VRM Class. The VRI Class for this area is III.

In determining whether the proposed action would conform to the assigned VRM class, the four levels of contrast roughly correspond with the four VRM classes. This means that a "strong" contrast rating may be acceptable in an area with VRM Class IV, but probably would not meet the objectives of a VRM Class I, II, or III area. Similarly, a "weak" contrast rating may be acceptable in an area with VRM Class II, but probably would not meet the objectives of a VRM Class I area. The table below shows the correlation between contrast rating and determining whether VRM objectives are met.

Degree of Contrast	VRM Class	Definition
None	Class I Preserve	The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention. (This classification is usually applied to wilderness areas, wild and scenic rivers, and other similar situations.)
Weak	Class II Retain	The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
Moderate	Class III Partially Retain	The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
Strong	Class IV Major Modification	The objective of this class is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management 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 through careful location, minimal disturbance, and repeating the basic elements.

The proposed project as seen from KOP-8 will create moderate visual contrasts of form and line, and weak visual contrasts of color and texture. This equates to a rating somewhere between Class II (retention of landscape character) and Class III (partial retention of landscape character).

Therefore, the proposed project will comply with the definition of Class III, above, as seen from KOP-8 at Dragon Wash in Joshua Tree National Park.

Additional Mitigating Measures (See item 3)

The PSPP EIS identified these Mitigation Measures to aid in reducing visual impact by reducing contrast.

The implementation of mitigation measures imposed by the Energy Commission as Conditions of Certification for the project also would avoid or reduce impacts on the quality of the human environment. These mitigation measures are summarized here in connection with the impacts they would address, and are set forth in full in Appendix B – APPLICANT PROPOSED MEASURES.

VIS-1, Surface Treatment of Project Structures and Buildings

VIS-2, Re-vegetation of Disturbed Soil Areas

VIS-3, Temporary and Permanent Exterior Lighting

VIS-4, Project Design

TRANS-6, Heliostat Positioning Plan

AQ-SC3, Construction Fugitive Dust Control

AQ-SC4, Dust Plume Response Requirement

BIO-8, Impact Avoidance and Minimization Measures

BIO-22, Decommissioning and Reclamation Plan

BLM-VIS-1, Component Color Treatments

BLM-VIS-2, Consultation with the NPS Night Sky Program Manager

No additional mitigation measures beyond these are required because of the view from KOP-8 at Dragon Wash (JTNP).

U.S. GOVERNMENT PRINTING OFFICE: 1985-461-988/33094

Form 8400 - 4
(September 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date 4/25/2013

District Palm Springs - South Coast

Resource Area Chuckwalla - Palen

Activity (program) Solar Energy

SECTION A. PROJECT INFORMATION

1. Project Name
Palen Solar Electric Generating System (PSEGS)

2. Key Observation Point
KOP 9 Alligator Rock ACEC (BLM)

3. VRM Class
VRI Class III
VRM Class (Not disclosed by BLM)

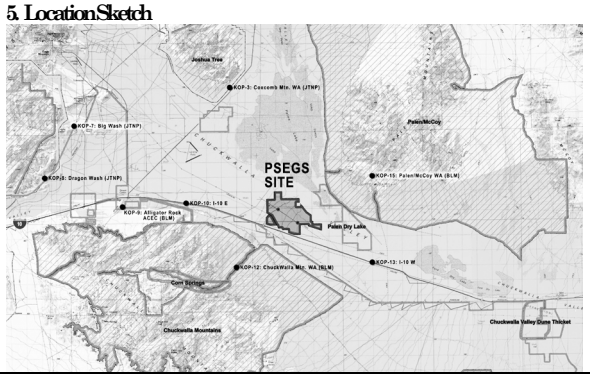
4. Location

Township 5 South

Range 17 E

Section Multiple Sections

5. Location Sketch



SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Gently sloping ground plane, pyramidal mountains in the background.	Rounded irregular creosote scrub and more vertical small trees in foreground. Middleground beyond is obscured. Background vegetation is not evident.	Cylindrical forms of transmission line tubular steel poles.
LINE	Linear, sloping drainage rills in foreground. Jagged silhouettes of mountains in background.	Converging line by banded vegetation patterns/	Horizontal transmission line conductors with strong vertical line of tubular steel poles with less dominant horizontal cross-arms and 6 weak horizontal lines of transmission line conductors.
COLOR	Tan colored sand in foreground. Becoming grey green with creosote scrub in the middleground. Background colors muted blue greys.	Relatively green to grey-green creosote scrub becoming obscured and indistinct farther away with distinct line of unvegetated dry lakebed.	Black to dark grey transmission line conductors. Dark browns of the vertical transmission line tubular steel poles.
TEXTURE	Smooth sloping foreground, middleground obscured. Smooth textured dry lakebed at the base of the rugged textured mountains in the background.	Medium coarse random texture in foreground. Gradation to more continuous medium middleground texture, with background vegetation indistinguishable.	Smooth textured transmission line conductors and tubular steel poles.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

It is approximately 11.1 miles from KOP-9 to the center of the proposed project (Background distance zone)

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	No change.	No change.	Two power towers create new vertical cylindrical forms approximately 11.1 miles away in the background distance zone.
LINE	No change.	No change.	Two power towers create weak new vertical lines in the landscape. These new lines do not protrude above the horizon in this sloping and relatively horizontal landscape.
COLOR	No change.	No change.	Two power towers are medium grey at this distance.
TEXTURE	No change.	No change.	Two power towers are smooth textured.

SECTION D. CONTRAST RATING ☐ SHORT TERM X LONG TERM

1. DEGREE OF CONSTRAST		FEATURES											
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)			
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
ELEMENTS	Form				X				X			X	
	Line				X				X			X	
	Color				X				X			X	
	Texture				X				X			X	

2. Does project design meet visual resource management objectives? X Yes ☐ No (Explain on reverse side)

3. Additional mitigating measures recommended? ☐ Yes X No (Explain on reverse side)

Evaluator's Names **Date**
Lee Roger Anderson, CA LLA#1586 **5/23/2013**
Peter Langenfeld
Timothy R Zack
Thomas Cherry, PLA, ASLA

SECTION D. (Continued)

Comments from item 2.
The BLM did not respond in a timely manner to a request for a management decision on the final adopted Visual Resource Management Class (VRM Class) or the Interim Visual Resource Management Class (IVRM) designations for the project area. For this analysis, we had to move forward using the presumption that the Visual Resource Inventory Class (VRI Class) has been adopted as the VRM Class. The VRI Class for this area is III.

In determining whether the proposed action would conform to the assigned VRM class, the four levels of contrast roughly correspond with the four VRM classes. This means that a "strong" contrast rating may be acceptable in an area with VRM Class IV, but probably would not meet the objectives of a VRM Class I, II, or III area. Similarly, a "weak" contrast rating may be acceptable in an area with VRM Class II, but probably would not meet the objectives of a VRM Class I area. The table below shows the correlation between contrast rating and determining whether VRM objectives are met.

Degree of Contrast	VRM Class	Definition
None	Class I Preserve	The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention. (This classification is usually applied to wilderness areas, wild and scenic rivers, and other similar situations.)
Weak	Class II Retain	The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
Moderate	Class III Partially Retain	The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
Strong	Class IV Major Modification	The objective of this class is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management 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 through careful location, minimal disturbance, and repeating the basic elements.

The proposed project as seen from KOP-9 will create weak visual contrasts of form, line, color, and texture. This equates to a rating of VRM Class II (retention of landscape character).

Therefore, the proposed project will comply with the definition of Class III, above, as seen from KOP-9 at Alligator Rock ACEC (BLM).

Additional Mitigating Measures (See item 3)

The PSPP EIS identified these Mitigation Measures to aid in reducing visual impact by reducing contrast.

The implementation of mitigation measures imposed by the Energy Commission as Conditions of Certification for the project also would avoid or reduce impacts on the quality of the human environment. These mitigation measures are summarized here in connection with the impacts they would address, and are set forth in full in Appendix B – APPLICANT PROPOSED MEASURES.

VIS-1, Surface Treatment of Project Structures and Buildings

VIS-2, Re-vegetation of Disturbed Soil Areas

VIS-3, Temporary and Permanent Exterior Lighting

VIS-4, Project Design

TRANS-6, Heliostat Positioning Plan

AQ-SC3, Construction Fugitive Dust Control

AQ-SC4, Dust Plume Response Requirement

BIO-8, Impact Avoidance and Minimization Measures

BIO-22, Decommissioning and Reclamation Plan

BLM-VIS-1, Component Color Treatments

BLM-VIS-2, Consultation with the NPS Night Sky Program Manager

No additional mitigation measures beyond these are required because of the view from KOP-9 at Alligator Rock ACEC (BLM).

U.S. GOVERNMENT PRINTING OFFICE: 1985-461-988/33094

Form 8400 - 4
(September 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date 4/26/2013

District Palm Springs - South Coast

Resource Area Chuckwalla - Palen

Activity (program) Solar Energy

SECTION A. PROJECT INFORMATION

1. Project Name
Palen Solar Electric Generating System (PSEGS)

2. Key Observation Point
KOP 10 I-10 Freeway Eastbound

3. VRM Class
VRI Class III
VRM Class (Not disclosed by BLM)

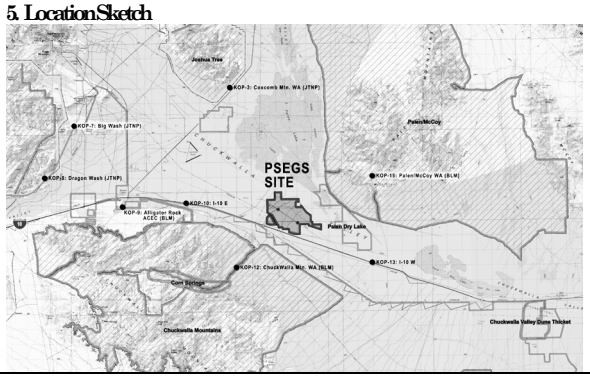
4. Location

Township 5 South

Range 17 E

Section Multiple Sections

5. Location Sketch



SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Trapezoidal roadbed, sloping planer middleground, pyramidal mountains in the background. There is no water visible in this landscape.	Rounded irregular creosote scrub and small trees in foreground. Beyond is gradating into mottled middleground and background.	Linear road. Jumbled vertical mass of geometric lattice towers at the electrical substation and seen against the horizon elsewhere. Vehicle motion on roadway attracts attention.
LINE	Jagged silhouettes of mountains. Strong middleground horizon line.	Indistinct vegetation lines	Strong vertical line of lattice towers and tubular steel poles, and converging lines of Interstate 10 roadway. Moderately strong horizontal line of the perimeter wall of the electrical substation.
COLOR	Heavy grey green creosote scrub vegetation obscures tan colored sand ground plane.	Mottled tans in foreground to grey greens in the middleground to blue green of the background.	Dark grey roadway surface. Glaring white to grey of the electrical substation transmission towers. Dark browns of the vertical tubular steel poles on both sides of the highway.
TEXTURE	Smooth sloping foreground and middleground obscured by coarse textured creosote scrub. Texture of distant mountains is indistinguishable.	Medium coarse random foreground. Gradation to more continuous middleground and background vegetation indistinguishable.	Smooth roadbed of Interstate 10. Lattice texture of the transmission towers within the electrical substation.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

It is approximately 6.9 miles from KOP-10 to the center of the proposed project (Background distance zone).

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	No change.	No change.	Two power towers create new vertical cylindrical forms and one of the elevated air cooled condensers creates a rectangular form approximately 6.9 miles away in the background distance zone.
LINE	No change.	No change.	Two power towers create strong new vertical lines in the landscape that protrude above the horizon in this sloping and relatively horizontal landscape. An elevated air cooled condenser creates a horizontal line at the base of one of the towers.
COLOR	No change.	No change.	Two power towers and the elevated air cooled condenser are medium grey at this distance.
TEXTURE	No change.	No change.	Two power towers and the elevated air cooled condenser are smooth textured.

SECTION D. CONTRAST RATING ☐ SHORT TERM X LONG TERM

1. DEGREE OF CONSTRAST		FEATURES											
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)			
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
ELEMENTS	Form				X			X			X		
	Line				X			X		X			
	Color				X			X				X	
	Texture				X			X				X	

2. Does project design meet visual resource management objectives? ☐ Yes X No (Explain on reverse side)

3. Additional mitigating measures recommended? X Yes ☐ No (Explain on reverse side)

Evaluator's Names	Date
Lee Roger Anderson, CA LLA#1586	5/23/2013
Peter Langenfeld	
Timothy R Zack	
Thomas Cherry, PLA, ASLA	

SECTION D. (Continued)

Comments from item 2.

The BLM did not respond in a timely manner to a request for a management decision on the final adopted Visual Resource Management Class (VRM Class) or the Interim Visual Resource Management Class (IVRM) designations for the project area. For this analysis, we had to move forward using the presumption that the Visual Resource Inventory Class (VRI Class) has been adopted as the VRM Class. The VRI Class for this area is III.

In determining whether the proposed action would conform to the assigned VRM class, the four levels of contrast roughly correspond with the four VRM classes. This means that a "strong" contrast rating may be acceptable in an area with VRM Class IV, but probably would not meet the objectives of a VRM Class I, II, or III area. Similarly, a "weak" contrast rating may be acceptable in an area with VRM Class II, but probably would not meet the objectives of a VRM Class I area. The table below shows the correlation between contrast rating and determining whether VRM objectives are met.

Degree of Contrast	VRM Class	Definition
None	Class I Preserve	The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention. (This classification is usually applied to wilderness areas, wild and scenic rivers, and other similar situations.)
Weak	Class II Retain	The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
Moderate	Class III Partially Retain	The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
Strong	Class IV Major Modification	The objective of this class is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management 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 through careful location, minimal disturbance, and repeating the basic elements.

The two power towers will protrude above the horizon and will attract attention and produce strong "line" contrasts directly in the cone of vision of eastbound I-10 travelers. Cylindrical form contrasts are moderate, and color and texture contrasts are weak as seen from KOP-10. The two visible power towers will create a major modification of the existing character of the Chuckwalla Valley as seen from the freeway. The proposed project will be a new dominant feature of the landscape visible for miles along the freeway. The project will change the character of the area, and will dominate the view and become the major focus of viewer attention as seen from KOP-10.

The visual character of this portion of the desert will become more developed because of the new Red Bluff Substation and the newly visible power towers. The overall visual impact of the proposed project will continue to convert this to an industrialized solar-electric landscape. However, some viewers may see the development of a solar resource facility as a point of positive visual interest. Taken as a whole, visual impacts to KOP-10 resulting from the proposed project are expected to be significant and un-mitigable, per BLM VRM standards, guidelines, and best management practices (BMPs).

Additional Mitigating Measures (See item 3)

The PSPP EIS identified these Mitigation Measures to aid in reducing visual impact by reducing contrast.

The implementation of mitigation measures imposed by the Energy Commission as Conditions of Certification for the project also would avoid or reduce impacts on the quality of the human environment. These mitigation measures are summarized here in connection with the impacts they would address, and are set forth in full in Appendix B – APPLICANT PROPOSED MEASURES.

VIS-1, Surface Treatment of Project Structures and Buildings

VIS-2, Re-vegetation of Disturbed Soil Areas

VIS-3, Temporary and Permanent Exterior Lighting

VIS-4, Project Design

TRANS-6, Heliostat Positioning Plan

AQ-SC3, Construction Fugitive Dust Control

AQ-SC4, Dust Plume Response Requirement

BIO-8, Impact Avoidance and Minimization Measures

BIO-22, Decommissioning and Reclamation Plan

BLM-VIS-1, Component Color Treatments

BLM-VIS-2, Consultation with the NPS Night Sky Program Manager

No additional mitigation measures beyond these are required because of the view from KOP-10 at I-10 Freeway Eastbound.

U.S. GOVERNMENT PRINTING OFFICE: 1985-461-988/33094

Form 8400-4
(September 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date 4/27/2013

District Palm Springs - South Coast

Resource Area Chuckwalla - Palen

Activity (program) Solar Energy

SECTION A. PROJECT INFORMATION

1. Project Name
Palen Solar Electric Generating System (PSEGS)

2. Key Observation Point
KOP 12 Chuckwalla-Mtn WA (BLM)

3. VRM Class
VRI Class III
VRM Class (Not disclosed by BLM)

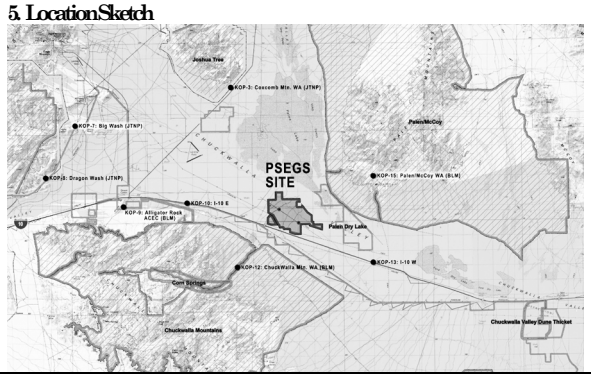
4. Location

Township 5 South

Range 17 E

Section Multiple Sections

5. Location Sketch



SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Planar foreground with deeply incised drainage feature with pyramidal mountains in the background. There is no water visible in this landscape.	Rounded irregular scrub in foreground. Conspicuously unvegetated dry lakebed. Beyond is gradating into lightly mottled background mountains mostly devoid of vegetation.	Dirt road serpentines from foreground to the middleground. Transmission line towers and highway discernible in the middleground due to motion associated with the traffic.
LINE	Sinuous line of drainage feature and highway. Strong complex lines in the background where bajada meets the mountains beyond.	Distinct vegetation lines where vegetation intersects dry lakebed.	Strong horizontal lines of the highway and moderate vertical lines of transmission lines towers.
COLOR	Mottled dark brown patina of the desert varnish of the bajada. Sand colored lake bed. With the pinkish browns of the mountains in the background.	Yellow greens of the creosote bushes blend into the brownish greens as the vegetation blends into the backgrounds grey greens.	Sand colored aggregate road. Brown colored transmission line towers.
TEXTURE	Jumbled rough moderately coarse foreground. Smooth fine textured lake bed. Complex coarse rugged mountains	Medium coarse random foreground. Smooth unvegetated lakebed and background vegetation indistinguishable.	Lattice texture of the transmission towers.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

It is approximately 4.6 miles from KOP-12 to the center of the proposed project (Foregr'd/Middlegr'd distance zone).

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Middleground has new horizontal form of heliostat fields occupying a portion of the bajada in front of the dry lakebed area. These forms are often mistaken for a natural body of water when seen at middleground or background distances.	Barren bajada in front of the dry lakebed is converted to heliostat fields. Foreground and background vegetation forms remain unchanged.	Two 750-foot tall power towers are cylindrical in form; the elevated air cooled condensers are rectangular in form; and the heliostat fields are horizontal in form.
LINE	New horizontal line created by heliostat fields in the middleground, similar to a natural water body. Sinuous line of drainage feature and highway remains.	Distinct vegetation lines where vegetation intersects the new horizontal heliostat fields, which lie at the base of backdrop mountains.	Strong vertical lines of the two power towers and strong horizontal lines of the air cooled condensers and heliostat fields make horizontal line of the highway and vertical lines of transmission towers become moderate in contrast.
COLOR	Heliostat mirrors reflect both sky and sunlight in the environment, creating a shiny silver and/or blue color, often mistaken for a natural body of water when seen at middleground or background distances.	Tan color of bajada is converted to shiny silver and/or blue color of the heliostat fields.	Two 750-foot tall cylindrical power towers and the elevated air cooled condensers are warm grey in color; heliostat fields are shiny silver and/or blue in color.
TEXTURE	Heliostat fields resemble natural body of water and are smooth textured.	No change in vegetation texture.	Heliostat fields, the elevated air cooled condensers and the two power towers are smooth textured.

SECTION D. CONTRAST RATING ☐ SHORT TERM X LONG TERM

1. DEGREE OF CONSTRAST		FEATURES												2. Does project design meet visual resource management objectives? ☐ Yes X No (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	3. Additional mitigating measures recommended? X Yes ☐ No (Explain on reverse side)
ELEMENTS	Form		X						X	X				Evaluator's Names / Date
	Line		X						X	X				Lee Roger Anderson, CA LLA#1586 5/22/2013
	Color	X							X	X				Peter Langenfeld
	Texture			X					X			X		Timothy R Zack
														Thomas Cherry, PLA, ASLA

SECTION D. (Continued)

Comments from item 2.
The BLM did not respond in a timely manner to a request for a management decision on the final adopted Visual Resource Management Class (VRM Class) or the Interim Visual Resource Management Class (IVRM) designations for the project area. For this analysis, we had to move forward using the presumption that the Visual Resource Inventory Class (VRI Class) has been adopted as the VRM Class. The VRI Class for this area is III.

In determining whether the proposed action would conform to the assigned VRM class, the four levels of contrast roughly correspond with the four VRM classes. This means that a "strong" contrast rating may be acceptable in an area with VRM Class IV, but probably would not meet the objectives of a VRM Class I, II, or III area. Similarly, a "weak" contrast rating may be acceptable in an area with VRM Class II, but probably would not meet the objectives of a VRM Class I area. The table below shows the correlation between contrast rating and determining whether VRM objectives are met.

Degree of Contrast	VRM Class	Definition
None	Class I Preserve	The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention. (This classification is usually applied to wilderness areas, wild and scenic rivers, and other similar situations.)
Weak	Class II Retain	The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
Moderate	Class III Partially Retain	The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
Strong	Class IV Major Modification	The objective of this class is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management 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 through careful location, minimal disturbance, and repeating the basic elements.

The strong contrasts of form, line, and color created by the proposed project will create a major modification of the existing character of the Chuckwalla Valley and Palen Dry Lake as seen against the backdrop of the Palen Mountains. The proposed project will be a new dominant feature of the landscape visible from travel routes and use areas in the viewshed. The project will change the existing visual character of the viewshed. The two 750-foot-tall solar power towers are the most visually noticeable elements, and from this view at KOP-12, the heliostat fields are highly visible too. The project will change the character of the area, and will dominate the view and become the major focus of viewer attention as seen from KOP-12.

The visual character of Palen Dry Lake will change from open space desert to that of a developed landscape. The overall visual impact of the proposed project is expected to completely alter the existing undeveloped scenic quality of this naturally evolving landscape, and convert it to an industrialized solar-electric landscape. However, some viewers may see the development of a solar resource facility as a point of positive visual interest. Taken as a whole, visual impacts to KOP-12 resulting from the proposed project are expected to be significant and un-mitigable, per BLM VRM standards, guidelines, and best management practices (BMPs).

Additional Mitigating Measures (See item 3)

The PSPP EIS identified these Mitigation Measures to aid in reducing visual impact by reducing contrast.

The implementation of mitigation measures imposed by the Energy Commission as Conditions of Certification for the project also would avoid or reduce impacts on the quality of the human environment. These mitigation measures are summarized here in connection with the impacts they would address, and are set forth in full in Appendix B – APPLICANT PROPOSED MEASURES.

VIS-1, Surface Treatment of Project Structures and Buildings

VIS-2, Re-vegetation of Disturbed Soil Areas

VIS-3, Temporary and Permanent Exterior Lighting

VIS-4, Project Design

TRANS-6, Heliostat Positioning Plan

AQ-SC3, Construction Fugitive Dust Control

AQ-SC4, Dust Plume Response Requirement

BIO-8, Impact Avoidance and Minimization Measures

BIO-22, Decommissioning and Reclamation Plan

BLM-VIS-1, Component Color Treatments

BLM-VIS-2, Consultation with the NPS Night Sky Program Manager

No additional mitigation measures beyond these are required because of the view from KOP-12 Chuckwalla-Mtn. WA (BLM).

U.S. GOVERNMENT PRINTING OFFICE: 1985-461-988/33094

Form 8400 - 4
(September 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date 4/27/2013

District Palm Springs - South Coast

Resource Area Chuckwalla - Palen

Activity (program) Solar Energy

SECTION A. PROJECT INFORMATION

1. Project Name
Palen Solar Electric Generating System (PSEGS)

2. Key Observation Point
KOP 13 I-10 Freeway Westbound

3. VRM Class
VRI Class III
VRM Class (Not disclosed by BLM)

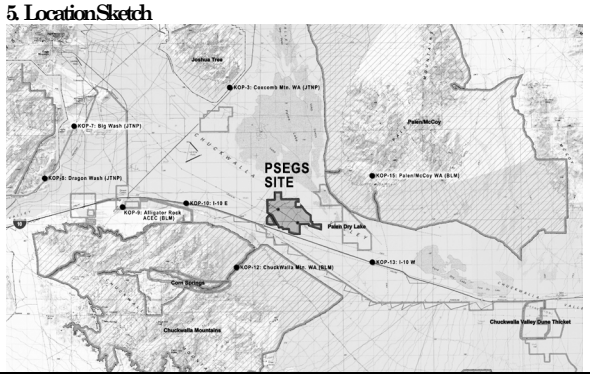
4. Location

Township 5 South

Range 17 E

Section Multiple Sections

5. Location Sketch



SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Planar foreground extends for miles with mountains in the background. There is no water visible in this landscape.	Rounded forms of creosote scrub and tumbleweed in foreground. Gradating to solid vegetation.	Trapezoidal road bed is dominant. Linear transparent fence.
LINE	Indistinguishable lines in foreground. Strong horizontal line of desert floor at the base of background mountains. Jagged silhouette of the Eagle Mountains at the horizon.	Distinct horizontal vegetation lines ay base of mountains	Strong horizontal lines of interstate freeway and fence leading straight away from the viewer.
COLOR	Tan colored sand in foreground and middle ground. Grey blue mountains at horizon.	Yellow greens of the creosote bushes blend into the brownish greens as the vegetation blends into the background's grey greens.	Dark grey freeway roadbed and reddish brown fence posts.
TEXTURE	Smooth ground plane. Texture of distant mountains is indistinguishable.	Medium grained random foreground. Transitioning to stippled in the middleground	Smooth textured freeway roadbed.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

It is approximately 6.4 miles from KOP-13 to the center of the proposed project (Background distance zone).

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	No change.	No change.	Two power towers create new vertical cylindrical forms and one of the elevated air cooled condensers create rectangular forms approximately 6.4 miles away in the background distance zone, as defined by the BLM.
LINE	No change.	No change.	Two power towers create strong new vertical lines in the landscape that protrude about the horizon in this relatively flat horizontal landscape. One of theelevated air cooled condensers creates a horizontal line at the base of the tower.
COLOR	No change.	No change.	Two power towers and the elevated air cooled condenser are medium grey at this distance.
TEXTURE	No change.	No change.	Two power towers and the elevated air cooled condenser are smooth textured.

SECTION D. CONTRAST RATING ☐ SHORT TERM X LONG TERM

1. DEGREE OF CONSTRAST		FEATURES												2. Does project design meet visual resource management objectives? ☐ Yes X No (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	3. Additional mitigating measures recommended? X Yes ☐ No (Explain on reverse side)
ELEMENTS	Form				X				X		X			Evaluator's Names: Lee Roger Anderson, CA LLA#1586; Peter Langenfeld; Timothy R Zack; Thomas Cherry, PLA, ASLA — Date: 5/23/2013
	Line				X				X	X				
	Color				X				X			X		
	Texture				X				X			X		

SECTION D. (Continued)

Comments from item 2.

The BLM did not respond in a timely manner to a request for a management decision on the final adopted Visual Resource Management Class (VRM Class) or the Interim Visual Resource Management Class (IVRM) designations for the project area. For this analysis, we had to move forward using the presumption that the Visual Resource Inventory Class (VRI Class) has been adopted as the VRM Class. The VRI Class for this area is III.

In determining whether the proposed action would conform to the assigned VRM class, the four levels of contrast roughly correspond with the four VRM classes. This means that a "strong" contrast rating may be acceptable in an area with VRM Class IV, but probably would not meet the objectives of a VRM Class I, II, or III area. Similarly, a "weak" contrast rating may be acceptable in an area with VRM Class II, but probably would not meet the objectives of a VRM Class I area. The table below shows the correlation between contrast rating and determining whether VRM objectives are met.

Degree of Contrast	VRM Class	Definition
None	Class I Preserve	The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention. (This classification is usually applied to wilderness areas, wild and scenic rivers, and other similar situations.)
Weak	Class II Retain	The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
Moderate	Class III Partially Retain	The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
Strong	Class IV Major Modification	The objective of this class is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management 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 through careful location, minimal disturbance, and repeating the basic elements.

The two power towers will protrude above the horizon and will attract attention and produce strong "line" contrasts. Form contrasts are moderate, and color and texture contrasts are weak as seen from the westbound freeway. The two visible power towers will create a major modification of the existing character of the Chuckwalla Valley as seen from the freeway. The proposed project will be a new dominant feature of the landscape visible for miles along the freeway. The project will change the character of the area, and will dominate the view and become the major focus of viewer attention as seen from KOP-13.

The visual character of this portion of the desert will change from open space to that of a developed landscape. The overall visual impact of the proposed project is expected to strongly alter the existing undeveloped scenic quality of this naturally evolving landscape, and convert it to an industrialized solar-electric landscape. However, some viewers may see the development of a solar resource facility as a point of positive visual interest. Taken as a whole, visual impacts to KOP-13 resulting from the proposed project are expected to be significant and un-mitigable, per BLM VRM standards, guidelines, and best management practices (BMPs).

Additional Mitigating Measures (See item 3)

The PSPP EIS identified these Mitigation Measures to aid in reducing visual impact by reducing contrast.

The implementation of mitigation measures imposed by the Energy Commission as Conditions of Certification for the project also would avoid or reduce impacts on the quality of the human environment. These mitigation measures are summarized here in connection with the impacts they would address, and are set forth in full in Appendix B – APPLICANT PROPOSED MEASURES.

VIS-1, Surface Treatment of Project Structures and Buildings

VIS-2, Re-vegetation of Disturbed Soil Areas

VIS-3, Temporary and Permanent Exterior Lighting

VIS-4, Project Design

TRANS-6, Heliostat Positioning Plan

AQ-SC3, Construction Fugitive Dust Control

AQ-SC4, Dust Plume Response Requirement

BIO-8, Impact Avoidance and Minimization Measures

BIO-22, Decommissioning and Reclamation Plan

BLM-VIS-1, Component Color Treatments

BLM-VIS-2, Consultation with the NPS Night Sky Program Manager

No additional mitigation measures beyond these are required because of the view from KOP-13 I-10 Freeway Westbound.

U.S. GOVERNMENT PRINTING OFFICE: 1985-461-988/33094

Form 8400 - 4
(September 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date 5/01/2013

District Palm Springs - South Coast

Resource Area Chuckwalla - Palen

Activity (program) Solar Energy

SECTION A. PROJECT INFORMATION

1. Project Name
Palen Solar Electric Generating System (PSEGS)

2. Key Observation Point
KOP 15 Palen / McCoy WA (BLM)

3. VRM Class
VRI Class III
VRM Class (Not disclosed by BLM)

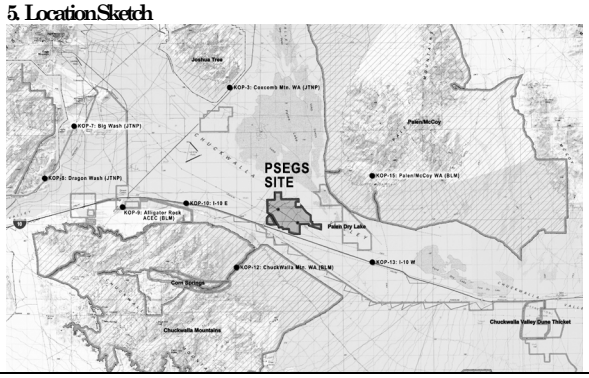
4. Location

Township 5 South

Range 17 E

Section Multiple Sections

5. Location Sketch



SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Jagged rough step pyramidal mountains in foreground. Sloping planar bajada. Flat planar dry lake bed. Indistinct pyramidal distant mountains. There is no water visible in this landscape.	Mountain foreground sparsely vegetated with clumps of grass. Creosote scrub desert floor. Small rectangular agricultural field.	None apparent.
LINE	Jagged sawtooth mountain ridge. Distinct simple horizontal line where bajada meets dry lakebed. Jagged skyline silhouette of distant mountains.	Distinct horizontal vegetation lines at base of mountains. Unvegetated drainage channels meander on bajada.	None apparent.
COLOR	Foreground reddish brown mountains. Brown mottled bajada. Sand colored dry lake bed. Pinkish mountains in background.	Sparse tan bunchgrass in foreground. Blue greens of bajada give way to tan of dry lakebed with green agricultural fields in the distance.	None apparent.
TEXTURE	Coarse textured rockforms in rugged foreground mountains transitioning to smooth textured bajada and dry lakebed, with rugged mountains in the background.	None apparent.	None apparent.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

It is approximately 6.1 miles from KOP-15 to the center of the proposed project (Background distance zone).

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Middleground has new horizontal form of heliostat fields occupying a portion of the bajada beyond the dry lakebed area. These forms are often mistaken for a natural body of water when seen at middleground or background distances.	Barren bajada beyond the dry lakebed is converted to horizontal heliostat fields. Foreground and background vegetation forms remain unchanged.	Two 750-foot tall power towers are cylindrical in form; the elevated air cooled condensers are rectangular in form; and the heliostat fields are horizontal in form.
LINE	New horizontal line created by heliostat fields in the middleground, similar to a natural water body.	Distinct vegetation line where vegetation intersects the new horizontal heliostat fields.	Strong vertical lines of the two power towers. Strong horizontal lines of the heliostat fields and moderate horizontal lines of the elevated air cooled condensers.
COLOR	Heliostat mirrors reflect both sky and sunlight in the environment, creating a shiny silver and/or blue color, often mistaken for a natural body of water when seen at middleground or background distances.	Tan color of bajada converted to shiny silver and/or blue color of the heliostat fields.	Two 750-foot tall cylindrical power towers and the elevated air cooled condensers are warm grey in color; heliostat fields are shiny silver and/or blue in color.
TEXTURE	Heliostat fields resemble natural body of water and are smooth textured.	No change in vegetation texture.	Heliostat fields, the elevated air cooled condensers and the two power towers are smooth textured.

SECTION D. CONTRAST RATING ☐ SHORT TERM X LONG TERM

1. DEGREE OF CONSTRAST		FEATURES												2. Does project design meet visual resource management objectives? ☐ Yes X No (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	3. Additional mitigating measures recommended? X Yes ☐ No (Explain on reverse side)
ELEMENTS	Form			X					X	X				Evaluator's Names / Date
	Line			X					X	X				Lee Roger Anderson, CA LLA#1586 5/22/2013
	Color	X							X	X				Peter Langenfeld
	Texture			X					X			X		Timothy R Zack
														Thomas Cherry, PLA, ASLA

SECTION D. (Continued)

Comments from item 2.
The BLM did not respond in a timely manner to a request for a management decision on the final adopted Visual Resource Management Class (VRM Class) or the Interim Visual Resource Management Class (IVRM) designations for the project area. For this analysis, we had to move forward using the presumption that the Visual Resource Inventory Class (VRI Class) has been adopted as the VRM Class. The VRI Class for this area is III.

In determining whether the proposed action would conform to the assigned VRM class, the four levels of contrast roughly correspond with the four VRM classes. This means that a "strong" contrast rating may be acceptable in an area with VRM Class IV, but probably would not meet the objectives of a VRM Class I, II, or III area. Similarly, a "weak" contrast rating may be acceptable in an area with VRM Class II, but probably would not meet the objectives of a VRM Class I area. The table below shows the correlation between contrast rating and determining whether VRM objectives are met.

Degree of Contrast	VRM Class	Definition
None	Class I Preserve	The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention. (This classification is usually applied to wilderness areas, wild and scenic rivers, and other similar situations.)
Weak	Class II Retain	The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
Moderate	Class III Partially Retain	The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
Strong	Class IV Major Modification	The objective of this class is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management 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 through careful location, minimal disturbance, and repeating the basic elements.

The strong contrasts of form, line, and color created by the proposed project will create a major modification of the existing character of the Chuckwalla Valley and Palen Dry Lake, as seen against the backdrop of the Chuckwalla Mountains. The proposed project will be a new dominant feature of the landscape visible from travel routes and use areas in the viewshed. The project will change the existing visual character of the viewshed. The two 750-foot-tall solar power towers are the most visually noticeable elements, and from this view at KOP-15, the heliostat fields are highly visible too. The project will change the character of the area, and will dominate the view and become the major focus of viewer attention as seen from KOP-15.

The visual character in the area of Palen Dry Lake will change from open space desert to that of a developed landscape. The overall visual impact of the proposed project is expected to completely alter the existing undeveloped scenic quality of this naturally evolving landscape, and convert it to an industrialized solar-electric landscape. However, some viewers may see the development of a solar resource facility as a point of positive visual interest. Taken as a whole, visual impacts to KOP-15 resulting from the proposed project are expected to be significant and un-mitigable, per BLM VRM standards, guidelines, and best management practices (BMPs). Therefore, the proposed project will not comply with the definition of Class III, above, as

seen from KOP-15 in the Palen / McCoy Wilderness Area, but rather, will equate to a rating of VRM Class IV.

Additional Mitigating Measures (See item 3)

The PSPP EIS identified these Mitigation Measures to aid in reducing visual impact by reducing contrast.

The implementation of mitigation measures imposed by the Energy Commission as Conditions of Certification for the project also would avoid or reduce impacts on the quality of the human environment. These mitigation measures are summarized here in connection with the impacts they would address, and are set forth in full in Appendix B – APPLICANT PROPOSED MEASURES.

VIS-1, Surface Treatment of Project Structures and Buildings

VIS-2, Re-vegetation of Disturbed Soil Areas

VIS-3, Temporary and Permanent Exterior Lighting

VIS-4, Project Design

TRANS-6, Heliostat Positioning Plan

AQ-SC3, Construction Fugitive Dust Control

AQ-SC4, Dust Plume Response Requirement

BIO-8, Impact Avoidance and Minimization Measures

BIO-22, Decommissioning and Reclamation Plan

BLM-VIS-1, Component Color Treatments

BLM-VIS-2, Consultation with the NPS Night Sky Program Manager

No additional mitigation measures beyond these are required because of the view from KOP-15 in the Palen / McCoy WA.

U.S. GOVERNMENT PRINTING OFFICE: 1985-461-988/33094

Form 8400 - 4
(September 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date 4/28/2013

District Palm Springs - South Coast

Resource Area Chuckwalla - Palen

Activity (program) Solar Energy

SECTION A. PROJECT INFORMATION

1. Project Name
Palen Solar Electric Generating System (PSEGS)

2. Key Observation Point
KOP 17 Bradshaw Trail, Mule Mtn. (LTVA)

3. VRM Class
VRI Class III
VRM Class (Not disclosed by BLM)

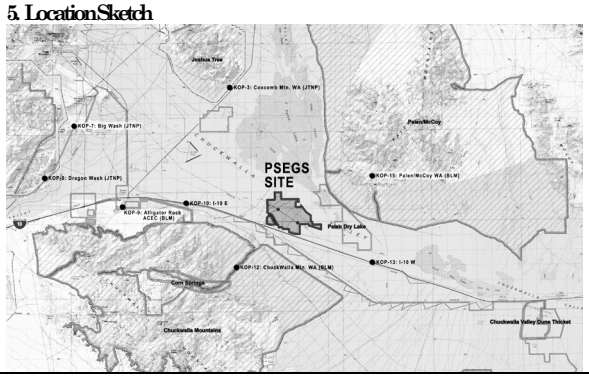
4. Location

Township 5 South

Range 17 E

Section Multiple Sections

5. Location Sketch



SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Planar ground plane in foreground. Pyramidal mountains in background.	Sparsely rounded clumpy vegetation in foreground. Taller line of riparian woodland blocks middleground. Indistinct vegetation forms in background.	Linear fence line in foreground. Geometric outhouses partially screened by creosote scrub.
LINE	Jagged silhouettes of distant mountains.	Horizontal line of riparian woodland obscures the middleground.	Horizontal fence line, with vertical fence posts, vertical and diagonal lines of out houses.
COLOR	Tan desert sands blue grey mountains	Grey-green creosote scrub. Green riparian canopy.	Rust colored fence. Tan outhouses with black vent pipes
TEX-TURE	Smooth foreground. Rugged rough background mountains	Coarse and irregular creosote scrub and riparian vegetation.	Smooth textured outhouses.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

It is approximately 23.0 miles from KOP-17 to the center of the proposed project (Seldom Seen distance zone).

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	No change.	No change.	No change.
LINE	No change.	No change.	No change.
COLOR	No change.	No change.	No change.
TEX-TURE	No change.	No change.	No change.

SECTION D. CONTRAST RATING ☐ SHORT TERM ☐ LONG TERM (NO CONTRAST – NOT VISIBLE)

1. DEGREE OF CONSTRAST		FEATURES											
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)			
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
ELEMENTS	Form				X				X				X
	Line				X				X				X
	Color				X				X				X
	Texture				X				X				X

2. Does project design meet visual resource management objectives? X Yes ☐ No (Explain on reverse side)

3. Additional mitigating measures recommended? ☐ Yes X No (Explain on reverse side)

Evaluator's Names — Date

Lee Roger Anderson, CA LLA #1586 — 5/23/2013
Peter Langenfeld
Timothy R Zack
Thomas Cherry, PLA, ASLA

SECTION D. (Continued)

Comments from item 2.
The proposed project is not visible from KOP-17.

Additional Mitigating Measures (See item 3)

The PSPP EIS identified these Mitigation Measures to aid in reducing visual impact by reducing contrast.

The implementation of mitigation measures imposed by the Energy Commission as Conditions of Certification for the project also would avoid or reduce impacts on the quality of the human environment. These mitigation measures are summarized here in connection with the impacts they would address, and are set forth in full in Appendix B – APPLICANT PROPOSED MEASURES.

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BIO-8, Impact Avoidance and Minimization Measures

BIO-22, Decommissioning and Reclamation Plan

BLM-VIS-1, Component Color Treatments

BLM-VIS-2, Consultation with the NPS Night Sky Program Manager

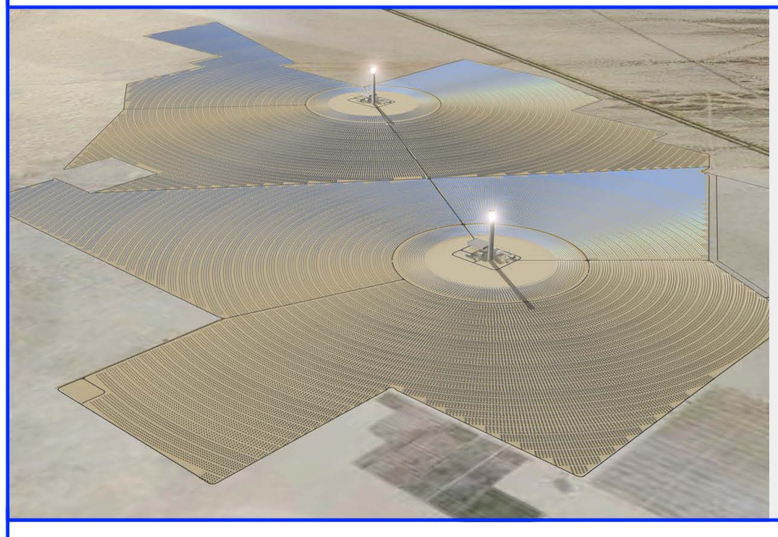
No additional mitigation measures beyond these are required because of the view from KOP-17 Bradshaw Trail, Mule Mtn. (LTVA).

U.S. GOVERNMENT PRINTING OFFICE: 1985-461-988/33094

Palen Solar Electric Generating System
Visual Resources Analysis

(Docket No. 09-AFC-07C)

Contents:



ATTACHMENT-B: GRAPHICS

Visual Resources Analysis

May: 2013 Palen Solar Electric Generating System

3DSCAPE

Palen Solar Electric Generating System
Visual Resources Analysis

(Docket No. 09-AFC-07C)

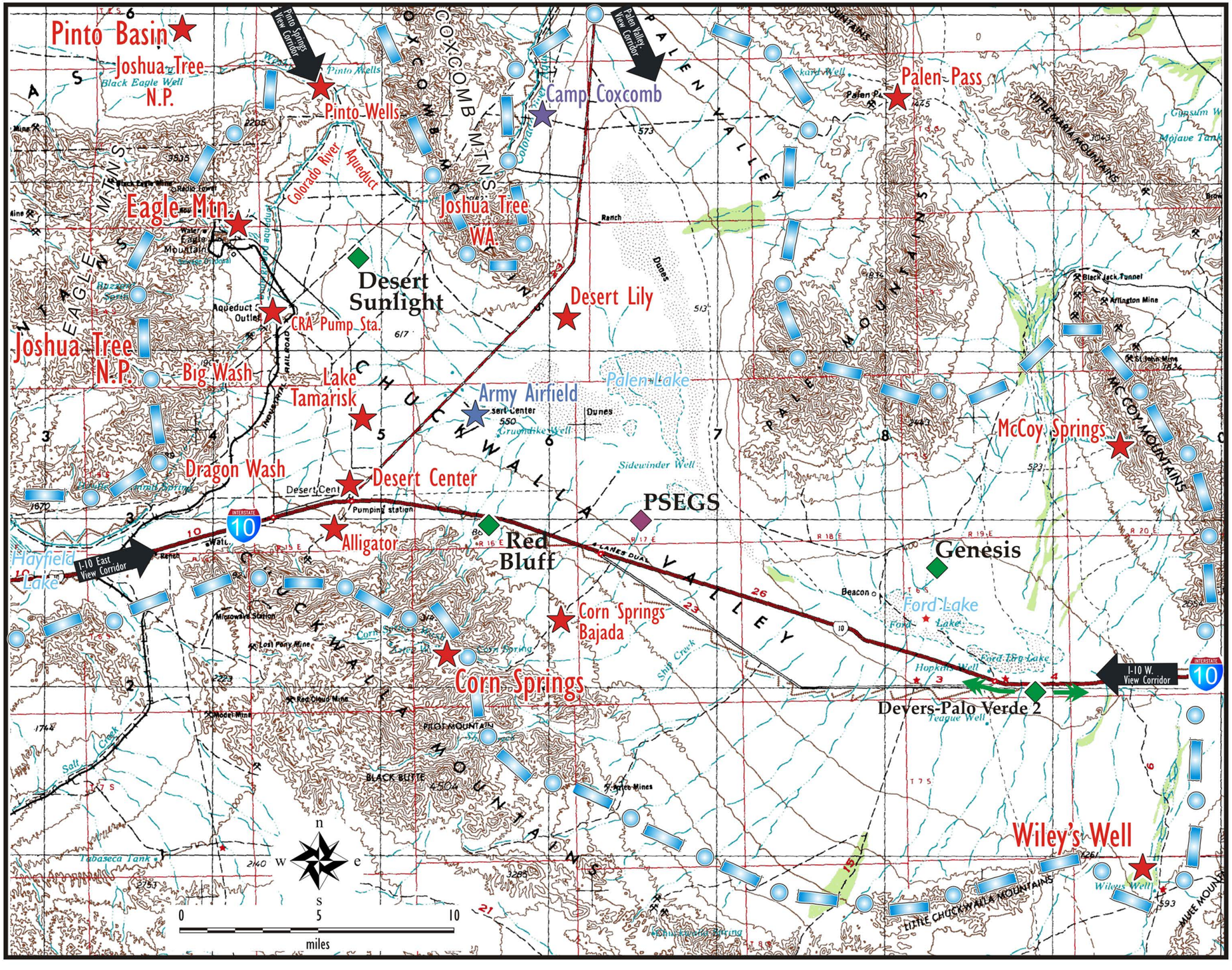
Contents:

ATTACHMENT-B: GRAPHICS

SECTION-1: Landscape Character

May: 2013 Palen Solar Electric Generating System

3DSCAPE



Significant Places

Contents:

Legend:

- PSEGS Site
- Historically Significant Place
- Cultural or Geographic Place
- Renewable Energy Proposal (under construction)
- Viewshed Boundary

May: 2013 Palen Solar Electric Generating System

3DSCAPE

Photo-1: Alligator Rock

Alligator Rock is a distinct topographic feature that rises unexpectedly from the west Chuckwalla Valley floor. Its environs are designated as a BLM Area of Critical Environmental Concern (ACEC). It has significant prehistoric value and is a part of the historical fabric of Desert Center.

Photo-2: Palen Mountains

This photograph is of the Palen Mountains looking across the northern reaches of Palen Dry Lake and the Palen Valley. This topographic encirclement is typical of the rest of the Chuckwalla Valley. The dramatic pyramidal forms create visual variety and depth into this landscape. It is an excellent example of how adjacent scenery can positively influence landscape scenic quality.

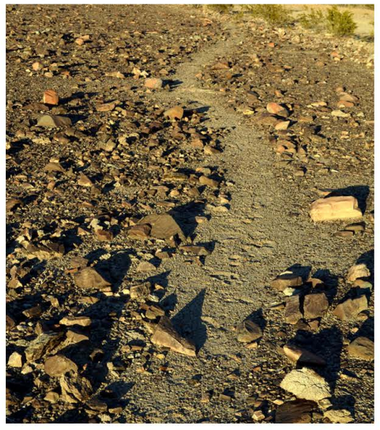
Photo-3: Eagle Mountain Pump Station

Human-made modifications to the Chuckwalla Valley Viewshed are not uncommon but are not pervasive. This infrastructure of the Colorado River Aqueduct has been a part of the valley's landscape for over 70 years. The aqueduct encircles the northern and eastern portions of the Chuckwalla Valley.

Photo-4: Desert Center Army Airfield

This photograph is representative of what remains of the historic World War II desert airfield that served General George S. Patton's Desert Training Center. These foundations are southwest of the Chuckwalla Valley Raceway, northeast of Desert Center.

Photo-5: Prehistoric Trail



This sinuous form on the ground plane of the Chuckwalla Mountain bajadas is a cleared pathway, a trail, perhaps prehistoric in origin. It is located in the Corn Springs ACEC.

Photo-6: Rock Art Panels

Traces of Native American occupation of the Chuckwalla Valley and its environs are not uncommon. These presumably prehistoric petroglyphs are symbols pecked into rocks, covered with a dark patina of desert varnish in the foothills of the Eagle Mountains.

Field Studies

Contents:

Photo-7: Desert Sunlight Solar Farm

This photograph is taken from Hayfield Road in JTNP, the view direction is northeast. The dark blue geometric feature in the middleground, which could be mistaken for a body of water, is actually a utility-scale photovoltaic electric solar farm. Construction on the farm continues; it was approximately half complete. The ruggedly steep Coxcomb Mountains serve as a scenic backdrop.

Photo-8: Lake Tamarisk

This photograph is a 180° panorama of the most densely populated location with the viewshed; the community of Lake Tamarisk. The grassy area on the left side of the frame is a recreational amenity; a nine hole golf course. The Riverside County library and fire station are just out of the view frame on the right.

Photo-9: Coxcomb Mountains

This view demonstrates the rugged terrain of the Coxcomb Mountains. The colorful ground plane in the foreground is due to the dramatic desert varnish that covers the bajadas. The varnish here was noticeably more orange / red than the other bajadas. Iron is the chemical that produces this biogeochemical phenomenon.

Photo-10: Palen Pass Road

Besides demonstrating the concept of vanishing point, this photograph of the Palen Valley and Palen Pass Road demonstrates the degree of contrast created in the environment by vegetation clearing and ground disturbance. If this road was built now, VRM BMPs would suggest it follow the topography and be more sinuous, making its presence in the landscape less profound.

Photo-11: The I-10 Corridor

This photograph shows the I-10 corridor path through the lowest portion of the Chuckwalla Valley, south of Palen Dry Lake ACEC. The corridor presence effectively divides the landscape into two separate landscape character units. The horizon has depth, with the Chuckwallas giving way to the Eagle Mountains over 20 miles away.

Contents:

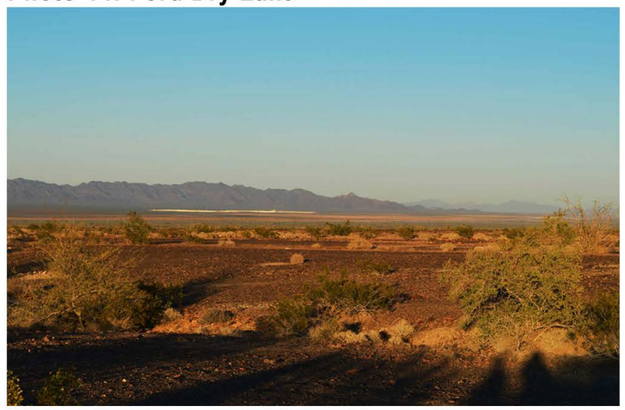
Photo-12: Desert Center

Desert Center has been the nadir of the Chuckwalla Valley since 1921. Stephen Ragsdale founded the desert outpost and named it. The commercial district of Desert Center has fallen on hard times. Even the iconic café is closed. Stanley, Stephen's son commissioned the planting of hundreds of large palms in geometric patterns. The photo shows the remnants of his vision. The deserted school house is beyond.

Photo-13: I-10 and BLM Utility Corridor

This represents a view from eastbound motorist on I-10. In the distant foreground, on the south (right) side of the freeway, the vertical presence of the Red Bluff Substation is visible, currently under construction. Converging transmission lines contribute to the vertical clutter. A communications tower with microwave relay antennae and other infrastructure is also visible. The galvanized steel appears quite spectral in the late afternoon light. The McCoy Mountains are visible in the background.

Photo-14: Ford Dry Lake



This view was captured from the Chuckwalla bajadas, looking northeast of the PSEGS site. The silver form in the seldom seen zone, (a distance greater than 15 miles), is the Genesis Solar Energy Project. At 16 miles distance, the fugitive glare from the parabolic troughs is conspicuous. The McCoy Mountains provide the backdrop. To the right, the Dome Rock Mountains are visible in Arizona, nearly 50 miles; testament to the vastness of this landscape.

Photo-15: The I-10 Palen Mountains

This photograph is a view across the Chuckwalla bajada, Palen Dry Lake, and the crescentic dune complex. The Palen Mountains rise dramatically out of their own smoothly sloping bajada. The Palen's pyramidal forms are accentuated with contrasting shadows in the late afternoon sunlight. Their jagged reddish-brown silhouette, framed by the azure sky, possesses identifiable peaks due of their diagnostic forms (shapes).

Photo-16: Desert Wash

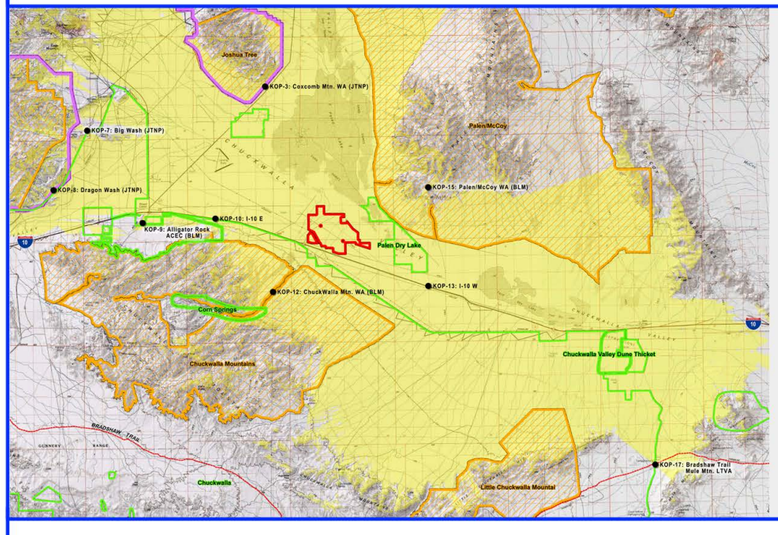
This photograph shows the mouth of a wash in the Eagle Mountains. Trees are an unusual occurrence in the Chuckwalla Valley Viewshed. The shade provided by their canopies is an asset, and are mostly found in washes, where their vertical presence can sometime become a formidable visual obstruction.

Contents:

Palen Solar Electric Generating System
Visual Resources Analysis

(Docket No. 09-AFC-07C)

Contents:

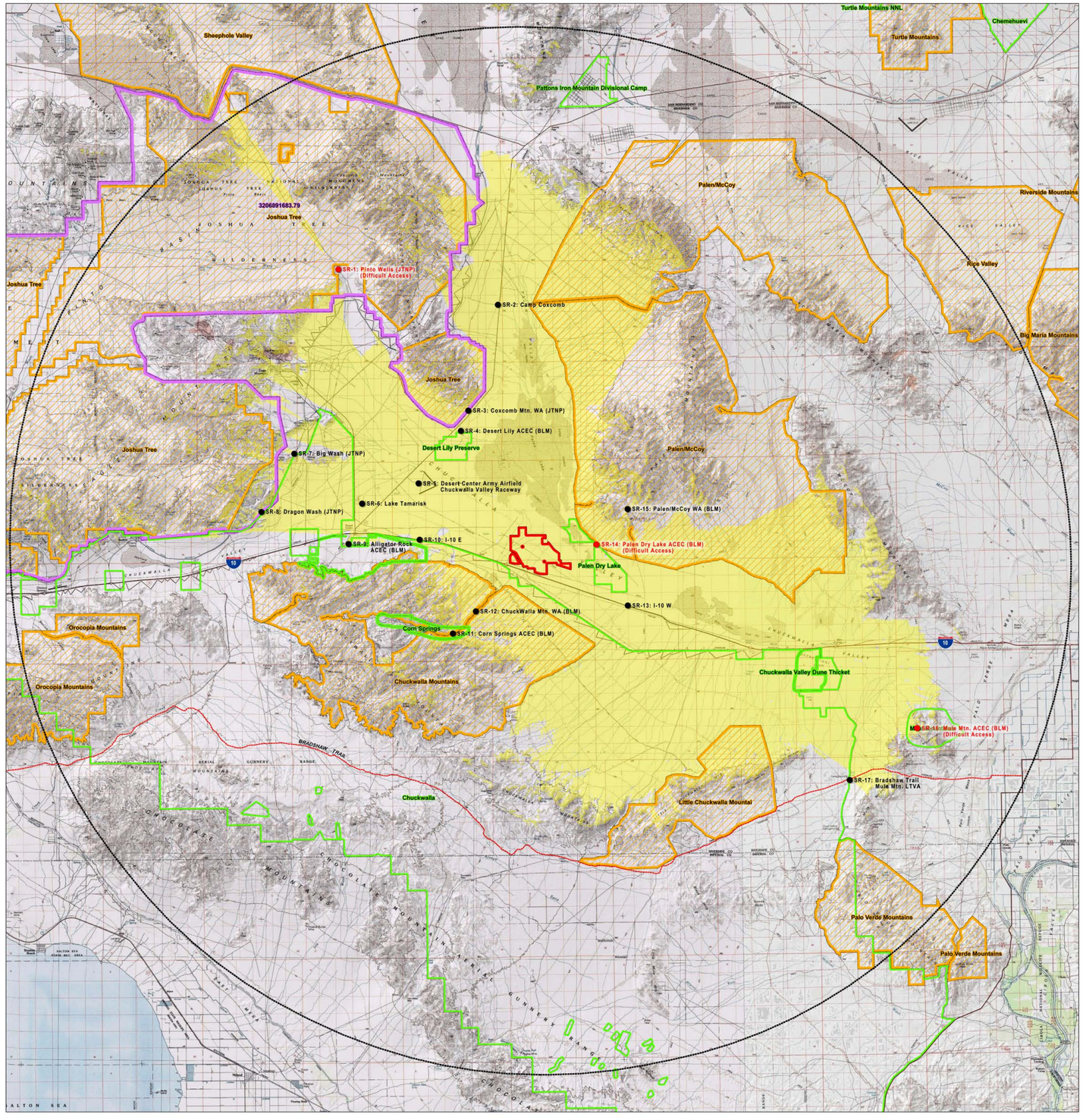


ATTACHMENT-B: GRAPHICS

SECTION-2: Viewshed Maps

May: 2013 Palen Solar Electric Generating System

3DSCAPE



Viewshed Delineation: Air Cooled Condensers

Contents:

Legend

- PSEGS Site Boundary
- PSEGS Power Towers
- 30-Mile Visual Impact Threshold Distance

PSEGS Air Cooled Condenser Viewshed Delineation

- Visible
  (24.22% of 30-mile Threshold Impacted)
- Not Visible

- Joshua Tree National Park
- BLM ACEC
- BLM Wilderness
- Bradshaw Trail
- SR: Sensitive Receptor

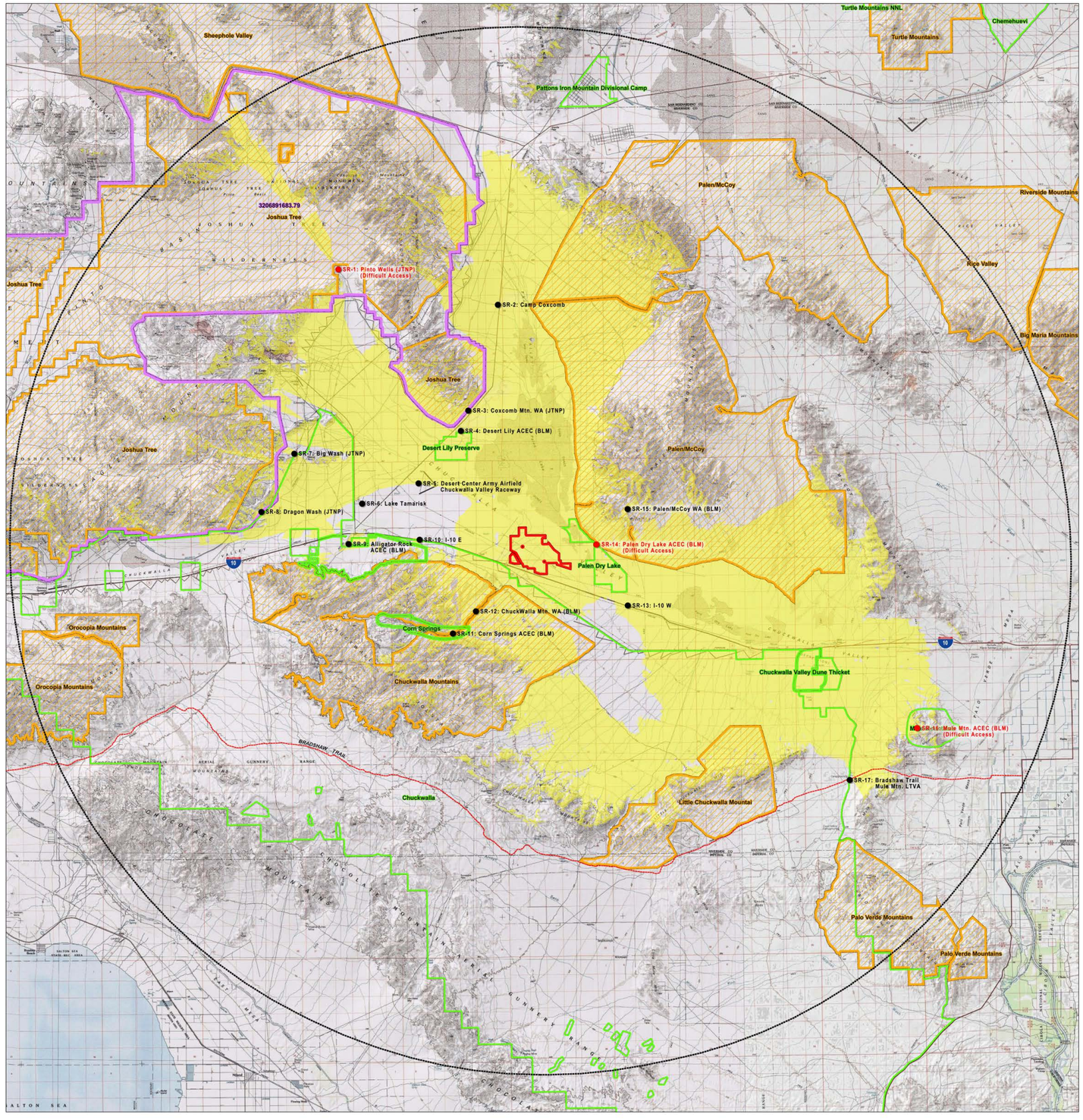
Specifications:
Viewsheds produced using 30-meter DEM.
Source: USGS National Elevation Dataset
Tower height: 759 feet
Viewer height: 6 feet

May: 2013 Palen Solar Electric Generating System

3DSCAPE

Viewshed Delineation: Heliostat Field

Contents:



Legend

- PSEGS Site Boundary
- PSEGS Power Towers
- 30-Mile Visual Impact Threshold Distance

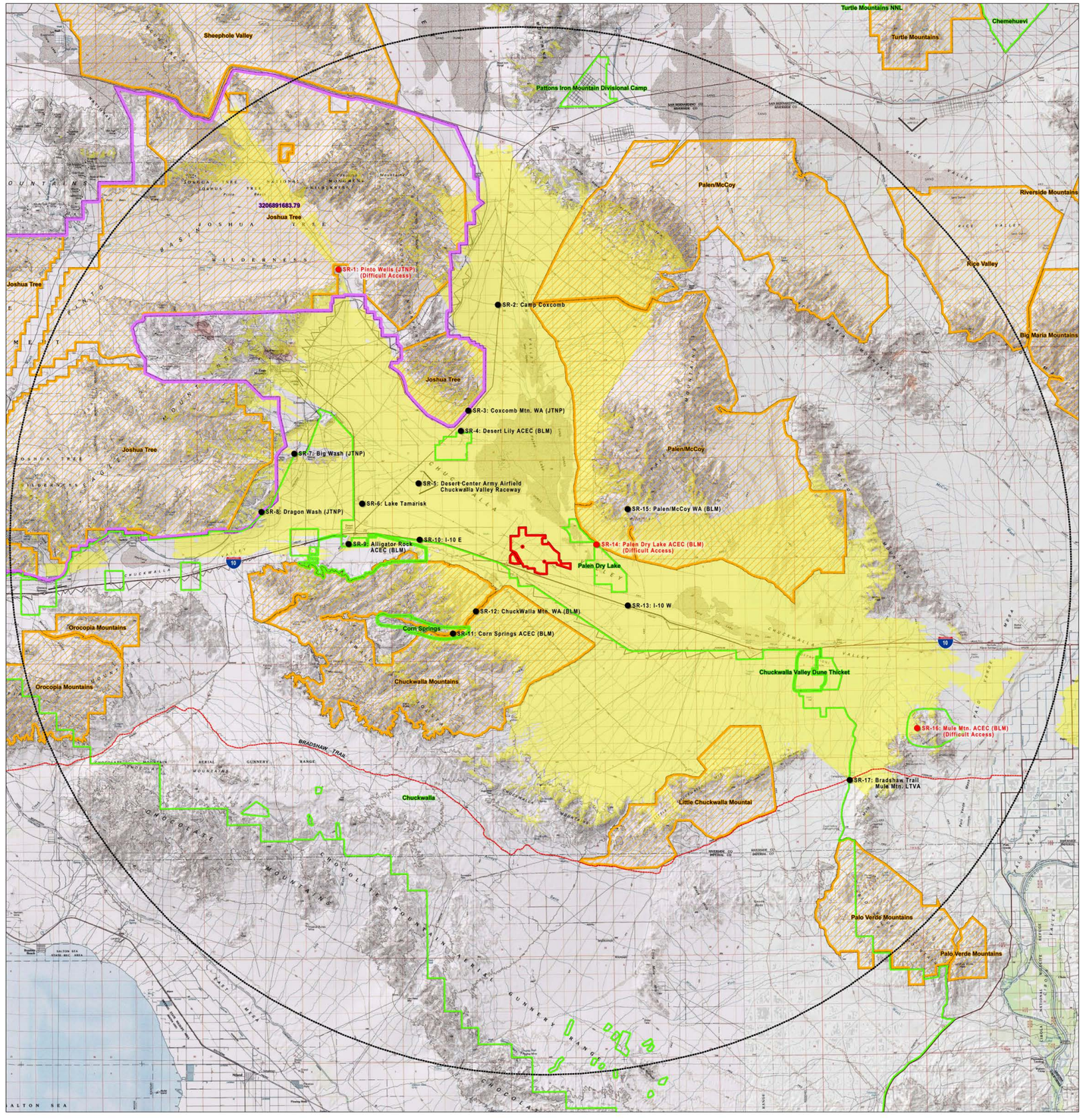
PSEGS Heliostat Field Viewshed Delineation

- Visible
  (23.58% of 30-mile Threshold Impacted)
- Not Visible
- Joshua Tree National Park
- BLM ACEC
- BLM Wilderness
- Bradshaw Trail
- SR: Sensitive Receptor

Specifications:
Viewsheds produced using 30-meter DEM.
Source: USGS National Elevation Dataset
Tower height: 759 feet
Viewer height: 6 feet

May: 2013 Palen Solar Electric Generating System

3DSCAPE



Viewshed Delineation:
Power Receiver Towers

Contents:

Legend

- PSEGS Site Boundary
- PSEGS Power Towers
- 30-Mile Visual Impact Threshold Distance

PSEGS Power Towers Viewshed Delineation

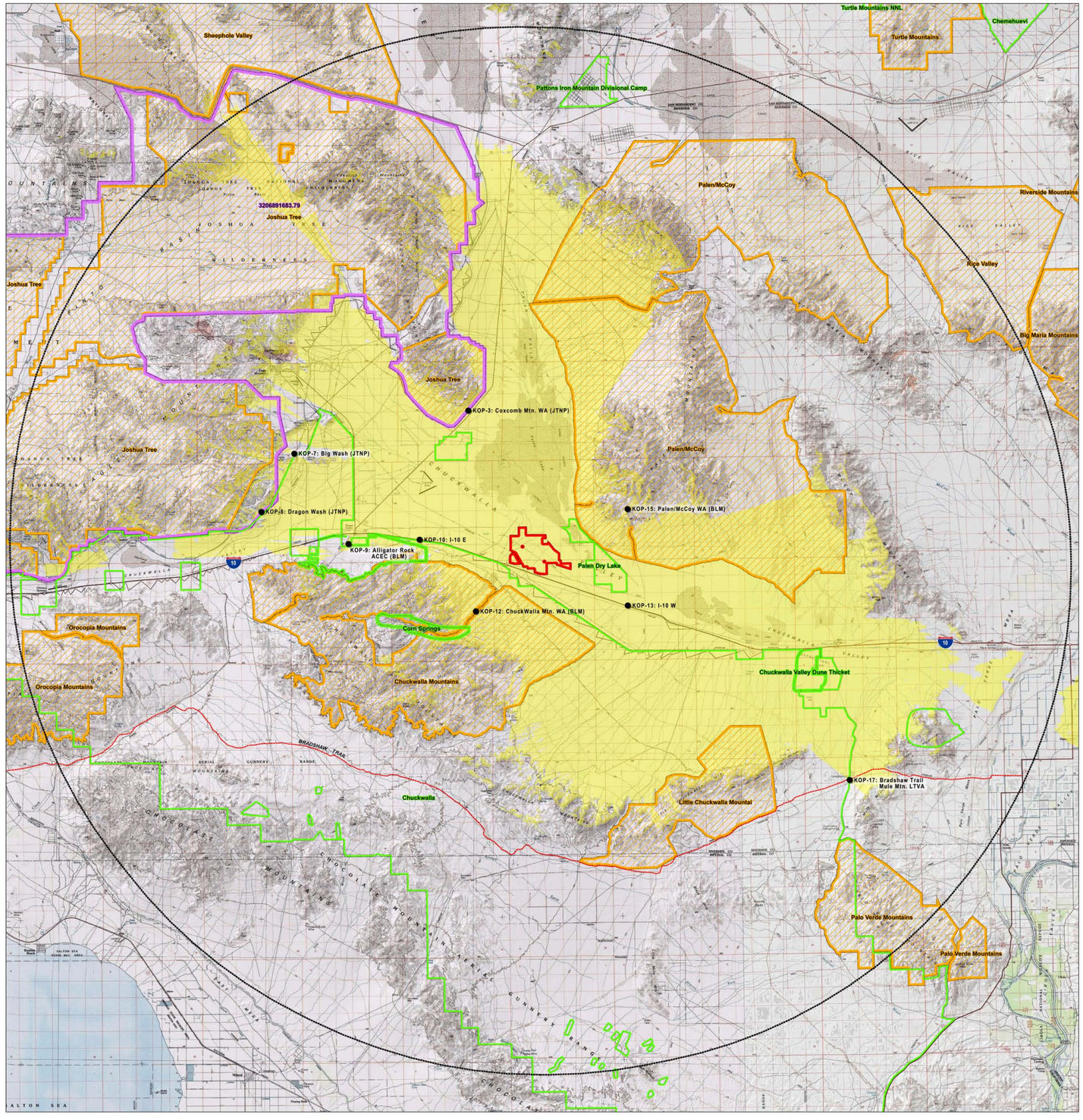
- Visible
  (26.66% of 30-mile Threshold Impacted)
- Not Visible

- Joshua Tree National Park
- BLM ACEC
- BLM Wilderness
- Bradshaw Trail
- SR: Sensitive Receptor

Specifications:
Viewsheds produced using 30-meter DEM.
Source: USGS National Elevation Dataset
Tower height: 759 feet
Viewer height: 6 feet

May: 2013 Palen Solar Electric Generating System

3DSCAPE



Viewshed Delineation: (KOP MAP)

Contents:

Legend

- PSEGS Site Boundary
- PSEGS Power Towers
- 30-Mile Visual Impact Threshold Distance

PSEGS Power Towers Viewshed Delineation

- Visible
  (26.66% of 30-mile Threshold Impacted)
- Not Visible
- Joshua Tree National Park
- BLM ACEC
- BLM Wilderness
- Bradshaw Trail
- KOP: Key Observation Point

Specifications:
Viewsheds produced using 30-meter DEM.
Source: USGS National Elevation Dataset
Tower height: 759 feet
Viewer height: 6 feet

May: 2013 Palen Solar Electric Generating System

3DSCAPE

Palen Solar Electric Generating System
Visual Resources Analysis

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ATTACHMENT-B: GRAPHICS

SECTION-3: Existing Conditions

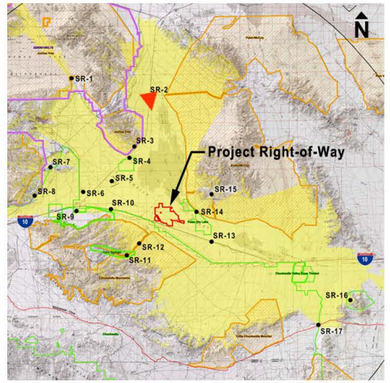
May: 2013 Palen Solar Electric Generating System

3DSCAPE

SR-02: Camp Coxcomb

Existing Condition

SR Location Map:



Legend:

- Sensitive Receptor
- All Sensitive Receptors
- Project Right-of-Way

Photography Data:

Time of photograph:	2:56 PM
Date of Photograph:	4/11/2013
Camera Lens:	50 mm
Weather Condition:	Clear (Mild Haze)
Viewing Direction:	170° S
Viewing Elevation:	650 ft

GPS Coordinates:

33°54'30.110"N 115°14'56.490"W

May: 2013 Palen Solar
Electric Generating System

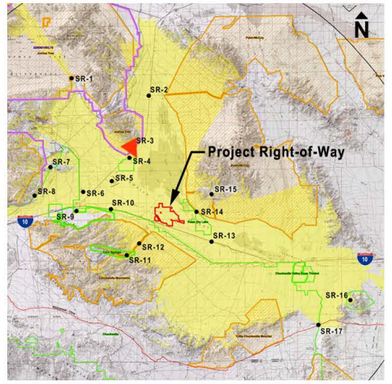
3DSCAPE

SR-03: Coxcomb Mtn. WA

(Joshua Tree National Park)

Existing Condition

SR Location Map:



Legend:

- Sensitive Receptor
- All Sensitive Receptors
- Project Right-of-Way

Photography Data:

Time of photograph:	2:24 PM
Date of Photograph:	4/11/2013
Camera Lens:	50 mm
Weather Condition:	Clear (Mild Haze)
Viewing Direction:	152° S.E.
Viewing Elevation:	563 ft

GPS Coordinates:

33°48'59.395"N 115°16'51.931"W

May: 2013 Palen Solar Electric Generating System

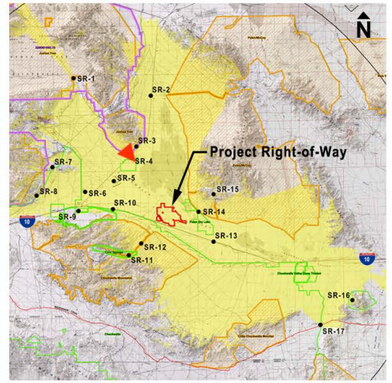
3DSCAPE

SR-04: Desert Lilly

(ACEC, BLM Land)

Existing Condition

SR Location Map:



Legend:

- Sensitive Receptor
- All Sensitive Receptors
- Project Right-of-Way

Photography Data:

Time of photograph:	2:04 PM
Date of Photograph:	4/11/2013
Camera Lens:	50 mm
Weather Condition:	Clear (Mild Haze)
Viewing Direction:	140° S.E.
Viewing Elevation:	503 ft

GPS Coordinates:

33°47'55.521"N 115°17'20.157"W

May: 2013 Palen Solar
Electric Generating System

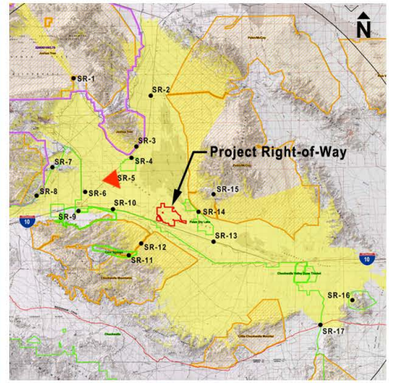
3DScape

SR-05: Desert Center

(Army Airfield / Raceway)

Existing Condition

SR Location Map:



Legend:

- Sensitive Receptor
- All Sensitive Receptors
- Project Right-of-Way

Photography Data:

Time of photograph:	1:31 PM
Date of Photograph:	4/11/2013
Camera Lens:	50 mm
Weather Condition:	Clear (Mild Haze)
Viewing Direction:	140° S.E.
Viewing Elevation:	545 ft

GPS Coordinates:

33°45'12.9"N 115°20'1.3"W

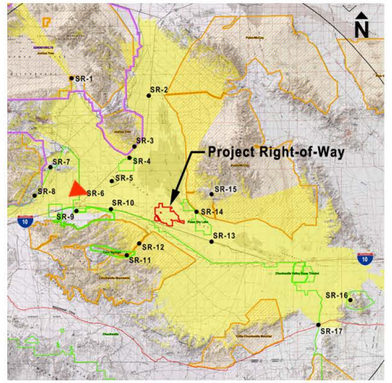
May: 2013 Palen Solar Electric Generating System

3DSCAPE

SR-06: Lake Tamarisk

Existing Condition

SR Location Map:



Legend:

- Sensitive Receptor
- All Sensitive Receptors
- Project Right-of-Way

Photography Data:

Time of photograph:	1:09 PM
Date of Photograph:	4/11/2013
Camera Lens:	50 mm
Weather Condition:	Clear (Mild Haze)
Viewing Direction:	110° E
Viewing Elevation:	736 ft

GPS Coordinates:

33°44'10.2"N 115°23'33.6"W

May: 2013 Palen Solar Electric Generating System

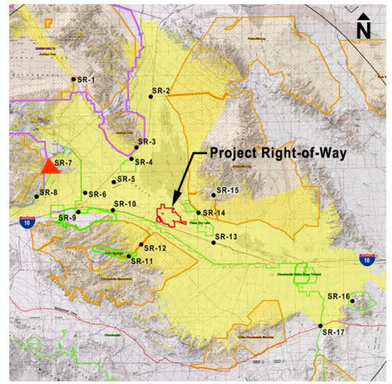
3DSCAPE

SR-07: Big Wash

(Joshua Tree National Park)

Existing Condition

SR Location Map:



Legend:

- Sensitive Receptor
- All Sensitive Receptors
- Project Right-of-Way

Photography Data:

Time of photograph:	12:02 PM
Date of Photograph:	4/11/2013
Camera Lens:	50 mm
Weather Condition:	Clear (Mild Haze)
Viewing Direction:	115° S.E.
Viewing Elevation:	1187 ft

GPS Coordinates:

33°46'48.5"N 115°27'46.7"W

May: 2013 Palen Solar Electric Generating System

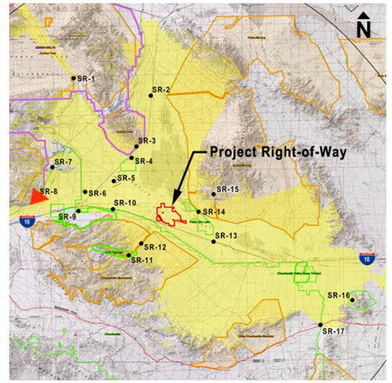
3DSCAPE

SR-08: Dragon Wash

(Joshua Tree National Park)

Existing Condition

SR Location Map:



Legend:

- Sensitive Receptor
- All Sensitive Receptors
- Project Right-of-Way

Photography Data:

Time of photograph:	11:17 AM
Date of Photograph:	4/11/2013
Camera Lens:	50 mm
Weather Condition:	Clear (Mild Haze)
Viewing Direction:	100° E.
Viewing Elevation:	1390 ft

GPS Coordinates:

33°43'46"N 115°29'49"W

May: 2013 Palen Solar Electric Generating System

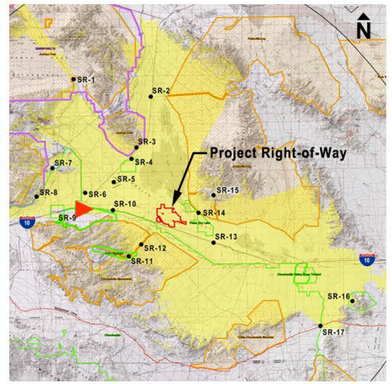
3DSCAPE

SR-09: Alligator Rock

(ACEC; BLM Land)

Existing Condition

SR Location Map:



Legend:

- Sensitive Receptor
- All Sensitive Receptors
- Project Right-of-Way

Photography Data:

Time of photograph:	10:33 AM
Date of Photograph:	4/11/2013
Camera Lens:	50 mm
Weather Condition:	Clear (Mild Haze)
Viewing Direction:	90° E.
Viewing Elevation:	1033 ft

GPS Coordinates:

33°42.291'N 115°24.165'W

May: 2013 Palen Solar Electric Generating System

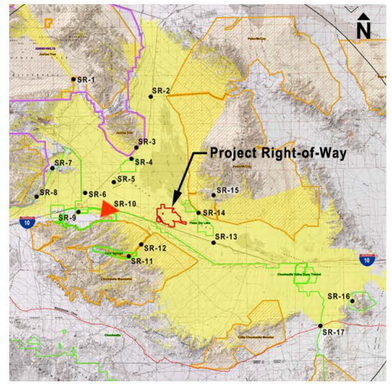
3DSCAPE

SR-10: I-10 Freeway East

(CA Interstate/Highway)

Existing Condition

SR Location Map:



Legend:

- Sensitive Receptor
- All Sensitive Receptors
- Project Right-of-Way

Photography Data:

Time of photograph:	5:48 PM
Date of Photograph:	4/11/2013
Camera Lens:	50 mm
Weather Condition:	Clear
Viewing Direction:	98° E.
Viewing Elevation:	810 ft

GPS Coordinates:

33°42'15.886N 115°19'58.587"W

May: 2013 Palen Solar Electric Generating System

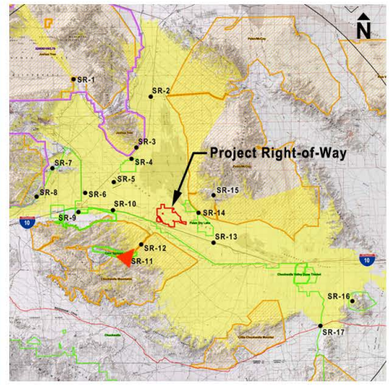
3DSCAPE

SR-11: Corn Springs

(ACEC, BLM Land)

Existing Condition

SR Location Map:



Legend:

- Sensitive Receptor
- All Sensitive Receptors
- Project Right-of-Way

Photography Data:

Time of photograph:	6:13 PM
Date of Photograph:	4/11/2013
Camera Lens:	50 mm
Weather Condition:	Clear
Viewing Direction:	40 °N.E.
Viewing Elevation:	1427 ft

GPS Coordinates:

33°37'20.456"N 115°17'57.228"W

May: 2013 Palen Solar Electric Generating System

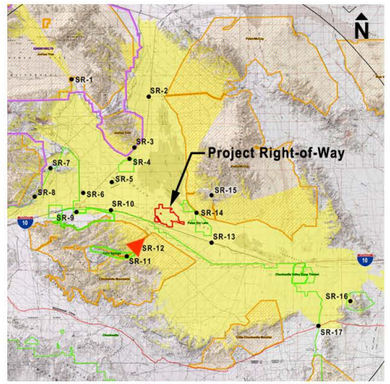
3DSCAPE

SR-12: Chuckwalla Mtn

(WA; BLM Land)

Existing Condition

SR Location Map:



Legend:

- Sensitive Receptor
- All Sensitive Receptors
- Project Right-of-Way

Photography Data:

Time of photograph:	6:28 PM
Date of Photograph:	4/11/2013
Camera Lens:	50 mm
Weather Condition:	Clear
Viewing Direction:	45° N.E.
Viewing Elevation:	1140 ft

GPS Coordinates:

33°38'29.492"N 115°16'30.076"W

May: 2013 Palen Solar Electric Generating System

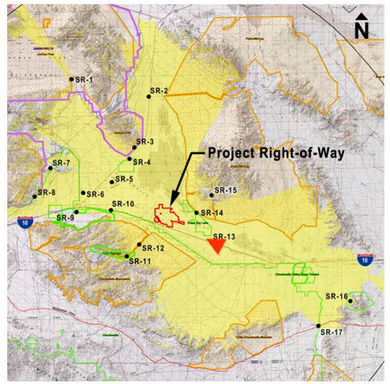
3DSCAPE

SR-13: I-10 Freeway West

(CA Interstate/Highway)

Existing Condition

SR Location Map:



Legend:

- Sensitive Receptor
- All Sensitive Receptors
- Project Right-of-Way

Photography Data:

Time of photograph:	5:26 PM
Date of Photograph:	4/11/2013
Camera Lens:	50 mm
Weather Condition:	Clear
Viewing Direction:	298° N.W.
Viewing Elevation:	419 ft

GPS Coordinates:

33°38'42.859"N 115°07'00.614"W

May: 2013 Palen Solar Electric Generating System

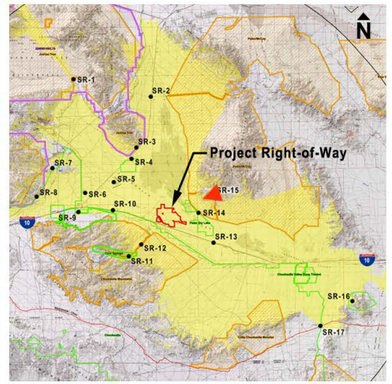
3DSCAPE

SR-15: Palen/McCoy WA

(BLM Land)

Existing Condition

SR Location Map:



Legend:

- Sensitive Receptor
- All Sensitive Receptors
- Project Right-of-Way

Photography Data:

Time of photograph:	12:35 PM
Date of Photograph:	12/15/2009
Camera Lens:	35 mm
Weather Condition:	Partly Cloudy
Viewing Direction:	251° S.W.
Viewing Elevation:	1,502 ft

GPS Coordinates:

33°43'38.6"N 115°07'53.1"W

(Photo data provided by AECOM)

May: 2013 Palen Solar Electric Generating System

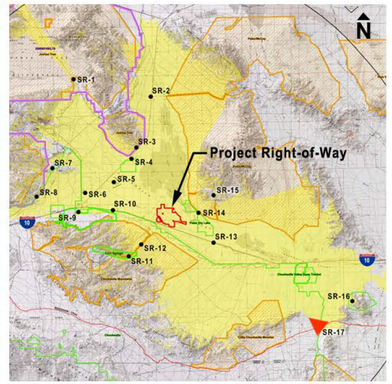
3DSCAPE

SR-17: Bradshaw Trail

(LTVA)

Existing Condition

SR Location Map:



Legend:

- Sensitive Receptor
- All Sensitive Receptors
- Project Right-of-Way

Photography Data:

Time of photograph:	4:06 PM
Date of Photograph:	4/11/2013
Camera Lens:	50 mm
Weather Condition:	Clear
Viewing Direction:	308° N.W.
Viewing Elevation:	589 ft

GPS Coordinates:

33°29'27.466"N 114°53'17.208"W

May: 2013 Palen Solar Electric Generating System

3DSCAPE

Palen Solar Electric Generating System
Visual Resources Analysis

(Docket No. 09-AFC-07C)

Contents:

ATTACHMENT-B: GRAPHICS

SECTION-4: Visual Simulations

May: 2013 Palen Solar Electric Generating System

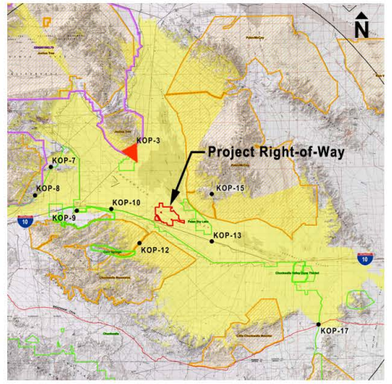
3DSCAPE

KOP-03: Coxcomb Mtn. WA

(Joshua Tree National Park)

Existing Condition

KOP Location Map:



Legend:

- Key Observation Point
- All Key Observation Points
- Project Right-of-Way

Photography Data:

Time of photograph:	2:24 PM
Date of Photograph:	4/11/2013
Camera Lens:	50 mm
Weather Condition:	Clear (Mild Haze)
Viewing Direction:	152° S.E.
Viewing Elevation:	563 ft

Distance: 9.99 mi (Background)

GPS Coordinates:

33°48'59.395"N 115°16'51.931"W

May: 2013 Palen Solar Electric Generating System

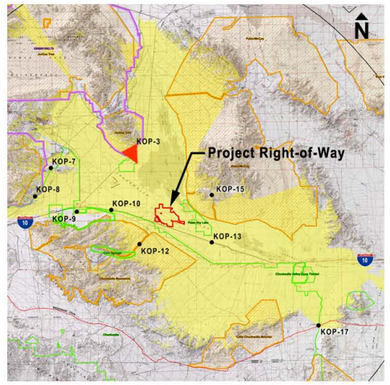
3DSCAPE

KOP-03: Coxcomb Mtn. WA

(Joshua Tree National Park)

Proposed Condition

KOP Location Map:



Legend:

- Key Observation Point
- All Key Observation Points
- Project Right-of-Way

Photography Data:

Time of photograph:	2:24 PM
Date of Photograph:	4/11/2013
Camera Lens:	50 mm
Weather Condition:	Clear (Mild Haze)
Viewing Direction:	152° S.E.
Viewing Elevation:	563 ft

Distance: 9.99 mi (Background)

GPS Coordinates:

33°48'59.395"N 115°16'51.931"W

May: 2013 Palen Solar Electric Generating System

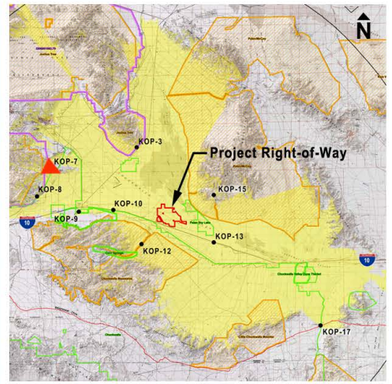
3DSCAPE

KOP-07: Big Wash

(Joshua Tree National Park)

Existing Condition

KOP Location Map:



Legend:

- Key Observation Point
- All Key Observation Points
- Project Right-of-Way

Photography Data:

Time of photograph: 12:02 PM

Date of Photograph: 4/11/2013

Camera Lens: 50 mm

Weather Condition: Clear (Mild Haze)

Viewing Direction: 115° S.E.

Viewing Elevation: 1187 ft

Distance: 15.46 mi (Seldom Seen)

GPS Coordinates:

33°46'48.5"N 115°27'46.7"W

May: 2013 Palen Solar Electric Generating System

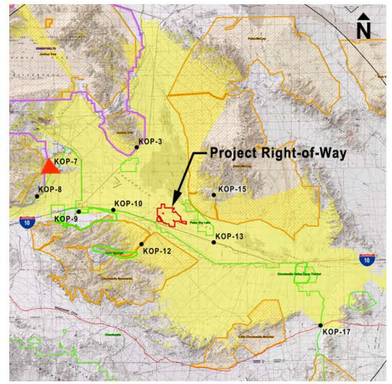
3DSCAPE

KOP-07: Big Wash

(Joshua Tree National Park)

Proposed Condition

KOP Location Map:



Legend:

- Key Observation Point
- All Key Observation Points
- Project Right-of-Way

Photography Data:

Time of photograph: 12:02 PM
Date of Photograph: 4/11/2013
Camera Lens: 50 mm
Weather Condition: Clear (Mild Haze)
Viewing Direction: 115° S.E.
Viewing Elevation: 1187 ft
Distance: 15.46 mi (Seldom Seen)

GPS Coordinates:

33°46'48.5"N 115°27'46.7"W

May: 2013 Palen Solar Electric Generating System

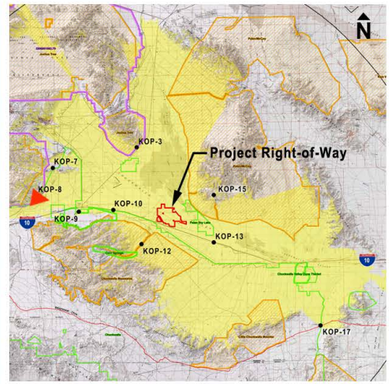
3DSCAPE

KOP-08: Dragon Wash

(Joshua Tree National Park)

Existing Condition

KOP Location Map:



Legend:

- Key Observation Point
- All Key Observation Points
- Project Right-of-Way

Photography Data:

Time of photograph: 11:17 AM
Date of Photograph: 4/11/2013
Camera Lens: 50 mm
Weather Condition: Clear (Mild Haze)
Viewing Direction: 100° E.
Viewing Elevation: 1390 ft
Distance: 15.98 mi (Seldom Seen)

GPS Coordinates:

33°43'46"N 115°29'49"W

May: 2013 Palen Solar
Electric Generating System

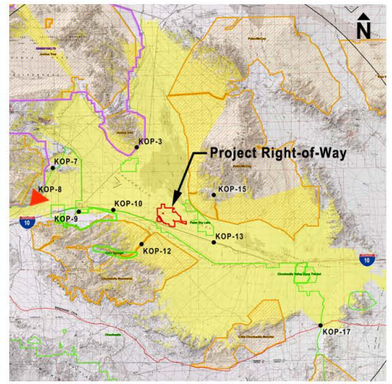
3DScape

KOP-08: Dragon Wash

(Joshua Tree National Park)

Proposed Condition

KOP Location Map:



Legend:

- Key Observation Point
- All Key Observation Points
- Project Right-of-Way

Photography Data:

Time of photograph: 11:17 AM
Date of Photograph: 4/11/2013
Camera Lens: 50 mm
Weather Condition: Clear (Mild Haze)
Viewing Direction: 100° E.
Viewing Elevation: 1390 ft
Distance: 15.98 mi (Seldom Seen)

GPS Coordinates:

33°43'46"N 115°29'49"W

May: 2013 Palen Solar
Electric Generating System

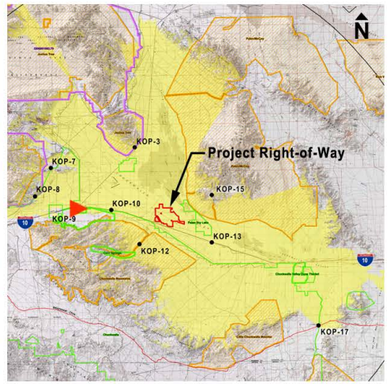
3DScape

KOP-09: Alligator Rock

(ACEC; BLM Land)

Existing Condition

KOP Location Map:



Legend:

- Key Observation Point
- All Key Observation Points
- Project Right-of-Way

Photography Data:

Time of photograph: 10:33 AM
Date of Photograph: 4/11/2013
Camera Lens: 50 mm
Weather Condition: Clear (Mild Haze)
Viewing Direction: 90° E.
Viewing Elevation: 1033 ft
Distance: 11.12 mi (Background)

GPS Coordinates:

33°42.291'N 115°24.165'W

May: 2013 Palen Solar
Electric Generating System

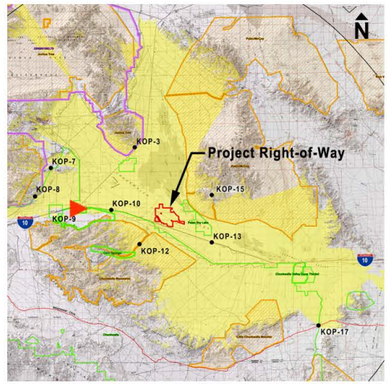
3DSCAPE

KOP-09: Alligator Rock

(ACEC; BLM Land)

Proposed Condition

KOP Location Map:



Legend:

- Key Observation Point
- All Key Observation Points
- Project Right-of-Way

Photography Data:

Time of photograph: 10:33 AM
Date of Photograph: 4/11/2013
Camera Lens: 50 mm
Weather Condition: Clear (Mild Haze)
Viewing Direction: 90° E.
Viewing Elevation: 1033 ft
Distance: 11.12 mi (Background)

GPS Coordinates:

33°42.291'N 115°24.165'W

May: 2013 Palen Solar Electric Generating System

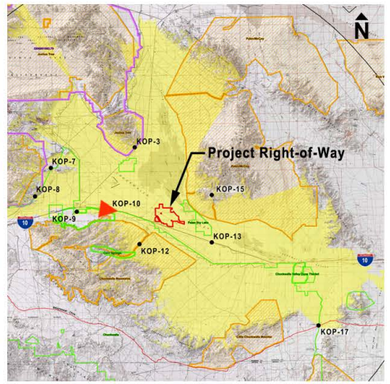
3DSCAPE

KOP-10: I-10 Freeway East

(CA Interstate/Highway)

Existing Condition

KOP Location Map:



Legend:

- Key Observation Point
- All Key Observation Points
- Project Right-of-Way

Photography Data:

Time of photograph:	5:48 PM
Date of Photograph:	4/11/2013
Camera Lens:	50 mm
Weather Condition:	Clear
Viewing Direction:	98° E.
Viewing Elevation:	810 ft

Distance: 6.87 mi (Background)

GPS Coordinates:

33°42'15.886N 115°19'58.587"W

May: 2013 Palen Solar Electric Generating System

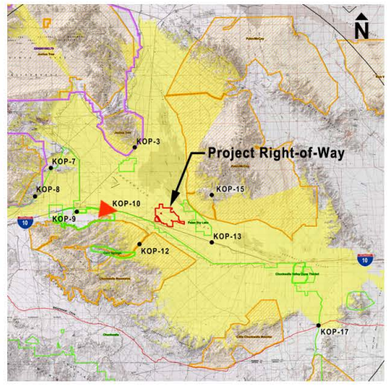
3DSCAPE

KOP-10: I-10 Freeway East

(CA Interstate/Highway)

Proposed Condition

KOP Location Map:



Legend:

- Key Observation Point
- All Key Observation Points
- Project Right-of-Way

Photography Data:

Time of photograph:	5:48 PM
Date of Photograph:	4/11/2013
Camera Lens:	50 mm
Weather Condition:	Clear
Viewing Direction:	98° E.
Viewing Elevation:	810 ft

Distance: 6.87 mi (Background)

GPS Coordinates:

33°42'15.886N 115°19'58.587"W

May: 2013 Palen Solar Electric Generating System

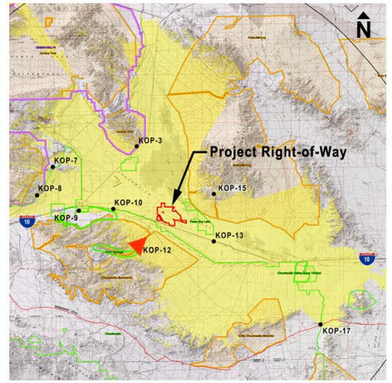
3DSCAPE

KOP-12: Chuckwalla Mtn

(WA; BLM Land)

Existing Condition

KOP Location Map:



Legend:

- Key Observation Point
- All Key Observation Points
- Project Right-of-Way

Photography Data:

Time of photograph:	6:28 PM
Date of Photograph:	4/11/2013
Camera Lens:	50 mm
Weather Condition:	Clear
Viewing Direction:	45° N.E.
Viewing Elevation:	1140 ft
Distance: 4.63 mi	Foreground / Middleground

GPS Coordinates:

33°38'29.492"N 115°16'30.076"W

May: 2013 Palen Solar Electric Generating System

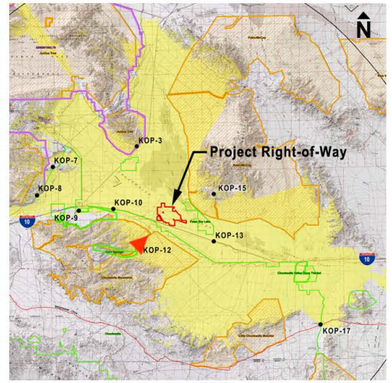
3DSCAPE

KOP-12: Chuckwalla Mtn

(WA; BLM Land)

Proposed Condition

KOP Location Map:



Legend:

- Key Observation Point
- All Key Observation Points
- Project Right-of-Way

Photography Data:

Time of photograph:	6:28 PM
Date of Photograph:	4/11/2013
Camera Lens:	50 mm
Weather Condition:	Clear
Viewing Direction:	45° N.E.
Viewing Elevation:	1140 ft
Distance: 4.63 mi	Foreground / Middleground

GPS Coordinates:

33°38'29.492"N 115°16'30.076"W

May: 2013 Palen Solar Electric Generating System

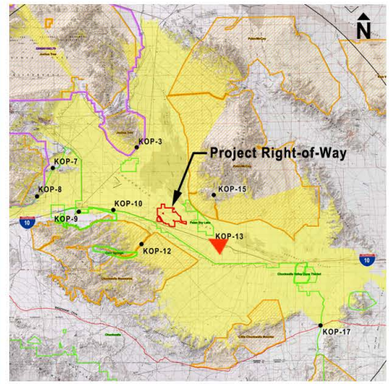
3DSCAPE

KOP-13: I-10 Freeway West

(CA Interstate/Highway)

Existing Condition

KOP Location Map:



Legend:

- Key Observation Point
- All Key Observation Points
- Project Right-of-Way

Photography Data:

Time of photograph:	5:26 PM
Date of Photograph:	4/11/2013
Camera Lens:	50 mm
Weather Condition:	Clear
Viewing Direction:	298° N.W.
Viewing Elevation:	419 ft

Distance: 6.39 mi (Background)

GPS Coordinates:

33°38'42.859"N 115°07'00.614"W

May: 2013 Palen Solar Electric Generating System

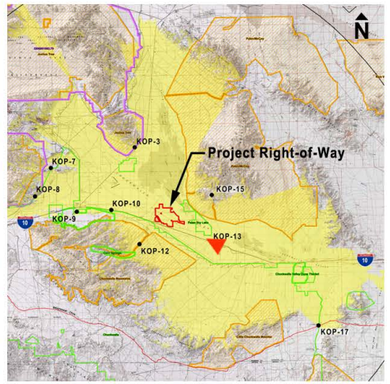
3DSCAPE

KOP-13: I-10 Freeway West

(CA Interstate/Highway)

Proposed Condition

KOP Location Map:



Legend:

- Key Observation Point
- All Key Observation Points
- Project Right-of-Way

Photography Data:

Time of photograph:	5:26 PM
Date of Photograph:	4/11/2013
Camera Lens:	50 mm
Weather Condition:	Clear
Viewing Direction:	298° N.W.
Viewing Elevation:	419 ft

Distance: 6.39 mi (Background)

GPS Coordinates:

33°38'42.859"N 115°07'00.614"W

May: 2013 Palen Solar Electric Generating System

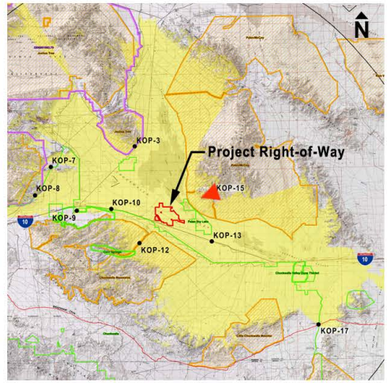
3DSCAPE

KOP-15: Palen/McCoy WA

(BLM Land)

Existing Condition

KOP Location Map:



Legend:

- Key Observation Point
- All Key Observation Points
- Project Right-of-Way

Photography Data:

Time of photograph:	12:35 PM
Date of Photograph:	12/15/2009
Camera Lens:	35 mm
Weather Condition:	Partly Cloudy
Viewing Direction:	251° S.W.
Viewing Elevation:	1,502 ft

Distance: 6.14 mi (Background)

GPS Coordinates:

33°43'38.6"N 115°07'53.1"W

(Photo data provided by AECOM)

May: 2013 Palen Solar Electric Generating System

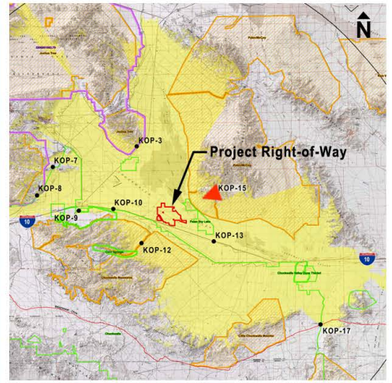
3DSCAPE

KOP-15: Palen/McCoy WA

(BLM Land)

Proposed Condition

KOP Location Map:



Legend:

- Key Observation Point
- All Key Observation Points
- Project Right-of-Way

Photography Data:

Time of photograph:	12:35 PM
Date of Photograph:	12/15/2009
Camera Lens:	35 mm
Weather Condition:	Partly Cloudy
Viewing Direction:	251° S.W.
Viewing Elevation:	1,502 ft

Distance: 6.14 mi (Background)

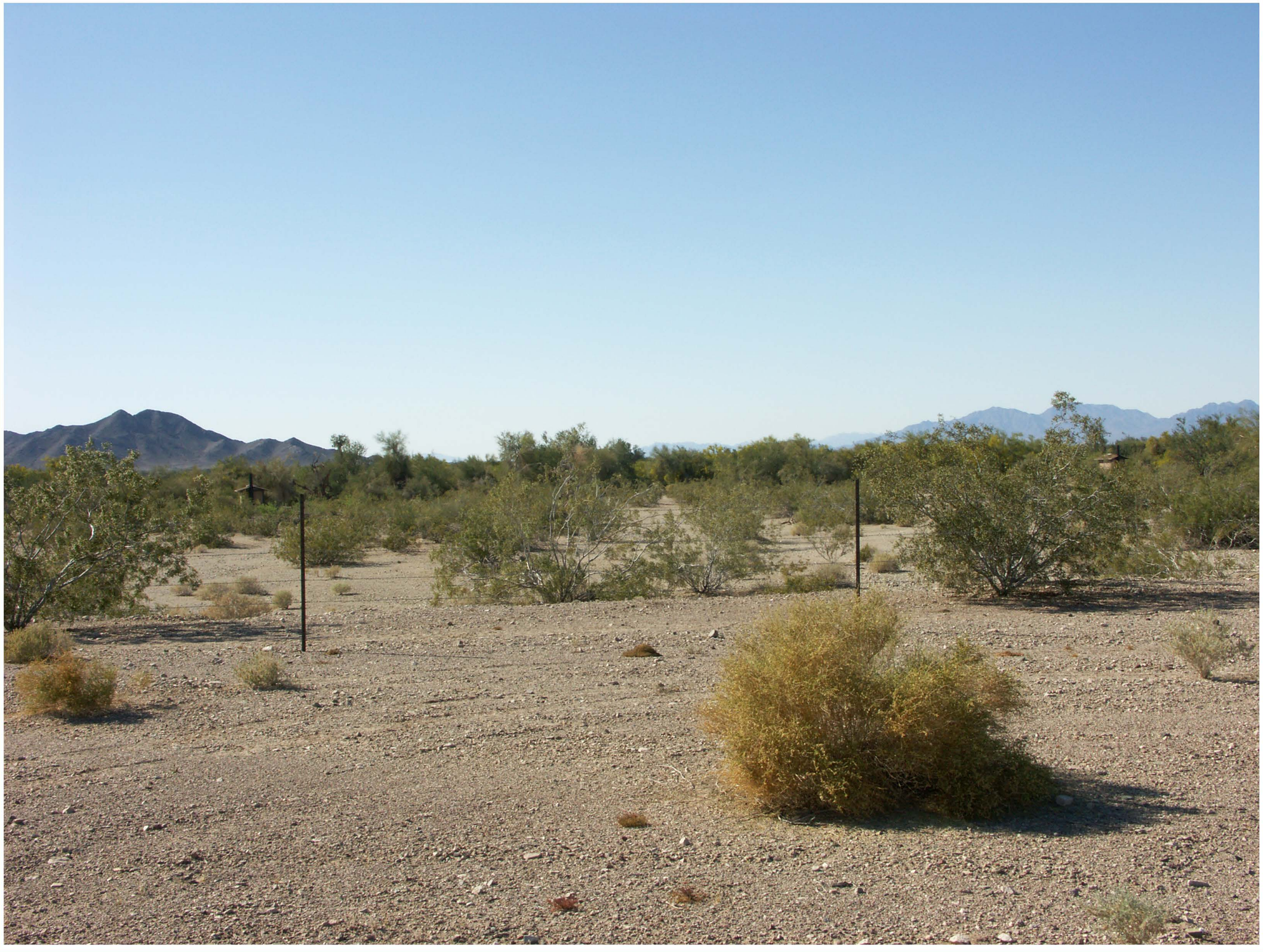
GPS Coordinates:

33°43'38.6"N 115°07'53.1"W

(Photo data provided by AECOM)

May: 2013 Palen Solar Electric Generating System

3DSCAPE

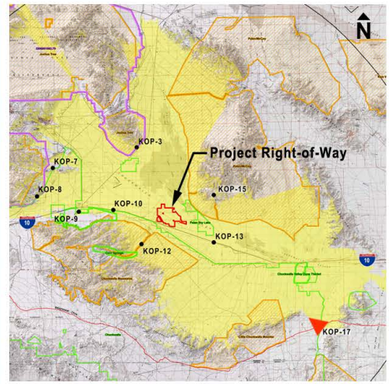


KOP-17: Bradshaw Trail

(LTVA)

Existing Condition

KOP Location Map:



Legend:

- Key Observation Point
- All Key Observation Points
- Project Right-of-Way

Photography Data:

Time of photograph:	4:06 PM
Date of Photograph:	4/11/2013
Camera Lens:	50 mm
Weather Condition:	Clear
Viewing Direction:	308° N.W.
Viewing Elevation:	589 ft

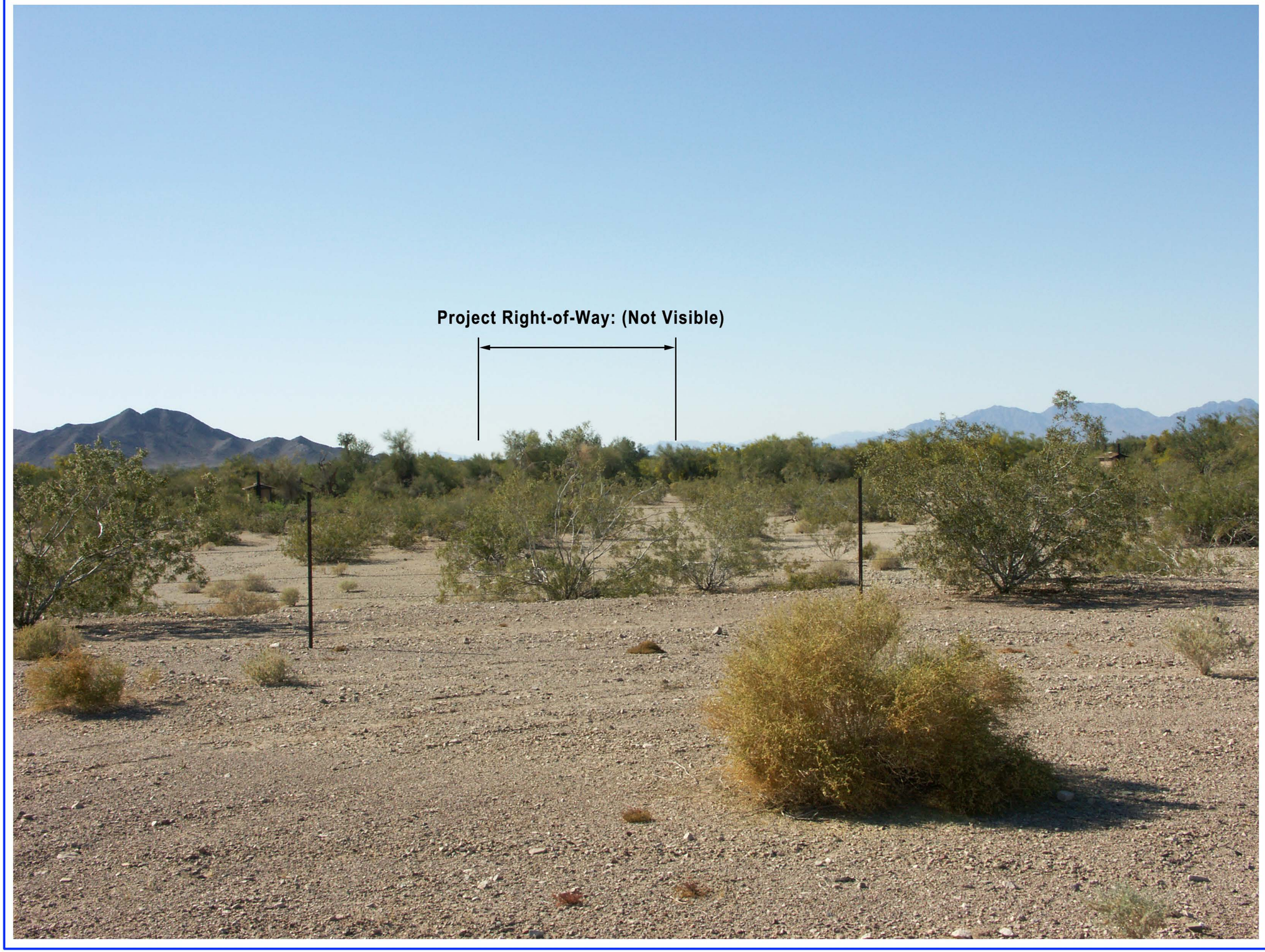
Distance: 22.98 mi (Seldom Seen)

GPS Coordinates:

33°29'27.466"N 114°53'17.208"W

May: 2013 Palen Solar Electric Generating System

3DSCAPE

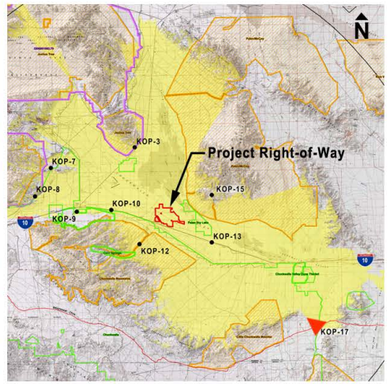


KOP-17: Bradshaw Trail

(LTVA)

Proposed Condition

KOP Location Map:



Legend:

- Key Observation Point
- All Key Observation Points
- Project Right-of-Way

Photography Data:

Time of photograph:	4:06 PM
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Distance: 22.98 mi (Seldom Seen)

GPS Coordinates:

33°29'27.466"N 114°53'17.208"W

May: 2013 Palen Solar Electric Generating System

3DSCAPE

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
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PALEN SOLAR ELECTRIC GENERATING SYSTEM AMENDMENT

Docket No. 09-AFC-7C
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(Revised 05/23/2013)

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After docketing, the Docket Unit will provide a copy to the persons listed below. Do not send copies of documents to these persons unless specifically directed to do so.

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DAVID HOCHSCHILD
Commissioner and Associate Member

Kenneth Celli
Hearing Adviser

Galen Lemei
Adviser to Presiding Member

Jennifer Nelson
Adviser to Presiding Member

Gabe Taylor
Adviser to Associate Member

Eileen Allen
Commissioners' Technical Adviser for Facility Siting

DECLARATION OF SERVICE

I, Marie Fleming, declare that on May 31, 2013, I served and filed copies of the attached PSEGS Visual Resources Analysis Report, dated May 2013. This document is accompanied by the most recent Proof of Service, which I copied from the web page for this project at: http://www.energy.ca.gov/sitingcases/palen/compliance/.

The document has been sent to the other persons on the Service List above in the following manner:

(C*heck one*)

For service to all other parties and filing with the Docket Unit at the Energy Commission:

___ I e-mailed the document to all e-mail addresses on the Service List above and personally delivered it or deposited it in the U.S. mail with first class postage to those parties noted above as "hard copy required"; **OR**

__X__ Instead of e-mailing the document, I personally delivered it or deposited it in the U.S. mail with first class postage to all of the persons on the Service List for whom a mailing address is given.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that I am over the age of 18 years.

Dated: May 31, 2013

Marie Fleming