

1.0 Executive Summary

Solar Millennium, LLC and Chevron Energy Solutions (joint developers who are hereafter referred to as the Applicants) propose to construct, own, and operate the Palen Solar Power Project (PSPP or Project). The Project is a concentrated solar thermal electric generating facility with two adjacent, independent, and identical solar plants of 250 megawatt (MW) nominal capacity each for a total capacity of 500 MW nominal.

As a solar thermal project over 50 MW located on land managed by the Bureau of Land Management (BLM), the Project is under the jurisdiction of both the California Energy Commission (CEC) and BLM. In 2007, the BLM California Desert District and the CEC executed a Memorandum of Understanding to establish a policy for the joint environmental review of solar thermal power plant projects. As a California agency, the CEC must comply with the requirements of the California Environmental Quality Act (CEQA), and as a Federal agency, the BLM must comply with the requirements of the National Environmental Policy Act (NEPA). The two agencies are conducting a joint review of the Project and a combined CEQA/NEPA document will be prepared.

Although CEQA and NEPA differ in several respects, they are sufficiently similar and flexible that a single environmental document can be prepared that will comply with both laws. This Application for Certification (AFC) is intended to address BLM needs as well as those of the CEC in order to support preparation of the joint NEPA/CEQA document.

1.1 Project Description

The PSPP is proposed on BLM land approximately 10 miles east of Desert Center, Riverside County, California (see Figure 1-1). Desert Center (population 125) is located along U.S. Interstate 10 (I-10) approximately halfway between the cities of Indio and Blythe, California and about three miles east of the southeast end of Joshua Tree National Park. An application has been filed with BLM for a right-of-way (ROW) grant of approximately 5,200 acres.

The Project will utilize solar parabolic trough technology to generate electricity. With this technology, arrays of parabolic mirrors collect heat energy from the sun and refocus the radiation on a receiver tube located at the focal point of the parabola. A heat transfer fluid (HTF) is heated to high temperature (750 degrees Fahrenheit) as it circulates through the receiver tubes. The heated HTF is then piped through a series of heat exchangers where it releases its stored heat to generate high-pressure steam. The steam is then fed to a traditional steam turbine generator where electricity is produced.

The Applicants' primary objectives for the PSPP are to construct, operate and maintain an efficient, economic, reliable, safe and environmentally-sound utility-scale solar generating facility utilizing proven, reliable, and efficient parabolic trough technology. The Project supports both State and national goals and objectives of energy independence, environmental protection, and economic prosperity. It helps meet specific legal and policy mandates in support of these goals. These include Senate Bill 1078 (California Renewable Portfolio Standard Program); Assembly Bill (AB) 32 (California Global Warming Solutions Act of 2006); and Executive Orders by Governor Schwarzenegger. On the national level, the Project implements Federal law (Energy Policy Act of 2005), and orders by Secretary of the Interior Salazar and his predecessor aimed at significantly increasing the supply of renewable energy from public lands. On an economic and social level, the Project creates jobs and helps ensure an adequate supply of electric energy to power and sustain the economy of Riverside County and the rest of California.

The Project's nominal 500-MW output will be produced by two adjacent, identical and independent 250-MW units (Unit #1 and Unit #2). The two power generating units will share a main office building, main warehouse and maintenance building; parking lot; other support facilities; and a central internal switchyard. Each unit will have its own solar field, comprised of piping loops arranged in parallel groups, and its own power block, centrally located within the solar field. Each power block will have its own HTF system, solar steam generator; steam turbine generator; air-cooled condenser (ACC) (for power plant cooling), and various auxiliary equipment.

From the onsite central switchyard, a new double-circuit 230-kilovolt (kV) transmission line will interconnect with Southern California Edison's (SCE) regional system at SCE's planned Red Bluff Substation, west of the site at a location that has not been finalized. Because the terminus of the Project's gen-tie line is not established, the Project's transmission line route also cannot be finalized. Section 2.0, Projection Description of the AFC, was written using a possible location for the substation west of the Project site near Desert Center. However, this is only a possible route and no environmental surveys have been conducted. For these reasons, transmission line impacts are not discussed in various environmental resource areas of the AFC (e.g., biological and cultural resources). When the Project's transmission line route is finalized, the needed environmental surveys and analyses will be performed and reported to the agencies and stakeholders.

The Project will use two propane-fueled boilers for quick startup and two heaters for HTF freeze protection. The fuel will be stored in onsite tanks, supplied via regular truck deliveries. Thermal power plants require cooling, which historically has involved large quantities of cooling water. The Project will utilize an ACC commonly referred to as "dry cooling", thereby dramatically reducing the amount of water needed by the facility. Total water consumption for the entire facility (both 250-MW units) is estimated at approximately 300 acre-feet per year (afy) supplied by onsite wells, about one-third of which will be used for washing the solar mirrors.

Project construction is expected to begin in the fourth quarter of 2010 and take approximately 39 months for Project completion. Commercial operation is expected to commence in the second quarter of 2013 for Unit #1 and in the fourth quarter of 2013 for Unit #2.

1.2 Project Alternatives

The Applicants evaluated a range of potential alternatives to the proposed Project in terms of location, linear facility routes, and design. The "No Project" alternative was considered and rejected because it would not fulfill the Project's objectives of developing a utility-scale solar facility to help meet State and Federal renewable energy mandates.

Five candidate site locations (including the proposed site) were considered. All of the sites have acceptable levels of solar intensity, and are in reasonable proximity to potential interconnection locations and highways. Two of the four sites considered showed poor prospects of obtaining site control because they include significant amounts of subdivided private land. These two sites also had suitability problems; one is crossed by an occupied transmission corridor, and the other has several large desert washes and less than optimal topography. A third site is in a flood zone, is in a desert tortoise DWMA, and also is almost entirely in desert tortoise critical habitat. The fourth site has four percent slopes (excessive for a solar thermal plant), and also is crossed by an occupied transmission corridor.

The Project site selected poses minimal site control issues, has desirable topography (slopes less than two percent), good road access, and is in reasonable proximity to transmission interconnection locations. The site has no outstanding environmental resource values, not being within an Area of Critical Environmental Concern (ACEC), DWMA, or designated wilderness. The site is considered low-value habitat for desert tortoise, although a small corner (less than 200 acres of a Project that will disturb almost 3,900 acres), despite being low-quality tortoise habitat, is on the very fringe of the Chuckwalla unit of

designated desert tortoise critical habitat. Given the clear preferability of the proposed site for the Project, none of the alternative sites was carried forward for detailed analysis.

Although dry-cooled, which greatly reduces water consumption, the Project will still require a small amount of water (300 afy) for needs such as solar mirror washing, feedwater makeup, fire water supply, onsite domestic use, cooling water for ancillary equipment, heat rejection and dust control. The Applicant evaluated three potential water sources: 1) groundwater from wells on the Project site, 2) reclaimed water from a wastewater treatment plant at the Lake Tamarisk Golf Resort approximately 11 miles from the Project site, and 3) extraction, transfer, and desalination of water from the Salton Sea. Obtaining reclaimed wastewater from Lake Tamarisk would only supply about one-third of Project water needs and would require a costly 11-mile pipeline, a combination of factors that renders the option infeasible. Using water from the Salton Sea would require both treatment (e.g. desalination) and construction of a 50-mile pipeline with attendant environmental risks. This option also is considered economically infeasible. Using site groundwater can be done without a pipeline and without significant adverse effects on other users or the groundwater basin. Hence, use of site groundwater is the selected option.

1.3 Environmental Information

The following paragraphs briefly summarize, in alphabetical order, the information contained in Section 5.0 of the AFC for each topical area. Both impacts of the PSPP and the cumulative impacts of the Project considered together with other probable or reasonably foreseeable projects are addressed. The focus of the cumulative impacts analysis is on projects in a roughly 50-mile stretch of the I-10 corridor between the Desert Center area and Blythe. Numerous renewable energy projects have been proposed in that area, mostly solar projects on BLM land, although it is considered unlikely that all of these actually will be constructed. Three electrical transmission line projects also are proposed. Projects were considered that have at least begun the permitting process; for projects on BLM lands, they were included in the cumulative analysis if they have submitted a draft or final Plan of Development (POD) to BLM. The PODs and published environmental documents for other projects were the source of data on these projects. A total of 18 projects were included, 15 electrical generating facilities (10 on BLM land) and three transmission line projects

1.3.1 Air Quality

The Project will be a source of criteria pollutants nitrogen dioxide (NO₂, also expressed as NO_x), carbon monoxide (CO), sulfur dioxide (SO₂, also expressed as SO_x), respirable particulate matter (PM₁₀), and fine particulate matter associated with the operation of the two auxiliary boilers, two HTFs heaters, two emergency fire water pump engines, two emergency generator engines, two auxiliary cooling towers, the HTF expansion tanks, and maintenance traffic throughout the solar field. Controlled emissions from these sources will not exceed major source thresholds for any pollutant, and do not exceed the threshold above which emission offsets would be required for the Project.

The PSPP will be located within the South Coast Air Quality Management District (SCAQMD) rules require that Best Available Control Technology (BACT) be applied to any new or modified source that results in an emission increase of NO_x, SO_x, volatile organic compound, PM₁₀, or CO. The Applicants have proposed ultra-low-NO_x burners with propane as BACT for the Project auxiliary boilers and HTF heaters; Tier 3-compliant engines fueled with ultra-low sulfur diesel fuel as BACT for the emergency fire water pump and generator engines; high-efficiency drift eliminators as BACT for the auxiliary cooling towers; and two-stage condensing system with carbon adsorption as BACT for the HTF expansion tank vent.

Project construction emissions were modeled to determine impacts during the construction phase and Project impacts (without background) showed a potential for exceedances of the California Ambient Air Quality Standards (CAAQS) for NO₂ and PM₁₀. However, the modeling analysis is very conservative,

the site is remote, and feasible mitigation measures will be employed. The Project's estimated emissions during the commercial operations phase were also modeled to determine air quality impacts. Modeled concentrations, when added to background concentrations, are projected to be below the Federal and State standards for all criteria pollutants with the exception of 24-hour and annual PM10. The daily and annual PM10 exceedances are projected to occur because the monitored background concentrations, by themselves, are reported to be greater than the standards. Project contributions are relatively small (five percent and two percent of the 24-hour and annual PM10 CAAQS, respectively).

It should be noted that although there is some potential for PSPP to cause short-term exceedances of ambient air quality standards during construction, the Project will have a long-term benefit of reducing greenhouse gas (GHG) and other pollutant emissions over the long term compared to conventional fossil-fueled power plants.

Although new PM10 emissions are estimated to result from the Project, the Project will likely actually reduce overall PM10 emissions in this region. By its nature, a solar energy project must keep dust to a minimum through the use of dust control measures because a film of dust on the mirrors will reduce their efficiency for power production. Dust control is achieved by a combination of soil stabilizers, water from the mirror washing, and compaction of the driving surface over time; these mitigation measures will be utilized by the proposed Project.

With respect to cumulative impacts, each of the cumulative projects will be required to undergo a separate environmental review process and address its own emissions and impacts on ambient air quality standards. The potential for cumulative effects is dependent on how many of the proposed projects actually are constructed, whether projects in proximity to each other are constructed on overlapping schedules so that peak emissions and impacts coincide. In any case, the potential for significant adverse cumulative impacts would occur essentially during construction of the various projects. Virtually all of the cumulative projects are renewable energy facilities and thus would displace electricity generation that otherwise likely would occur with higher-polluting fossil fuels.

1.3.2 Biological Resources

The PSPP would have less than significant impacts on biological resources with implementation of avoidance, minimizations, and mitigation measures, except for unmitigable significant impacts to DT and MFTL dispersal. A biological investigation was performed that included literature research, field surveys, and discussions with resources agencies representatives. The investigation covered the 3,870 acres that will be disturbed by Project construction and operation, plus a surrounding 8,640-acre buffer zone for a total area of about 12,500 acres.

The Project disturbance area is relatively undisturbed at present and is dominated by Sonoran creosote brush scrub. Other communities in the disturbance area include desert dry wash woodland, unvegetated ephemeral dry wash, active dunes and stabilized and partially stabilized desert dunes. Harwoods' milkvetch, a California Native Plant Society-listed and BLM-listed species, was the only Federal or State special-status plant species observed within the disturbance area. Jurisdictional waters delineations indicate that there are unlikely to be waters on the site considered jurisdictional by the USACE, but USACE concurrence has not yet been obtained. However, 256.7 acres of desert washes are considered State jurisdictional waters under CDFG jurisdiction. Impacts to plants and jurisdictional waters can be mitigated to below significance levels.

No live DT, a Federal and State-listed threatened species, were observed within the disturbance area during 2009 surveys. A moderate amount of DT sign (burrows, fresh scat) was observed. The site is considered suitable habitat for DT, but of low quality. There are 183 acres of DT federally designated critical habitat present in the southwest portion of the disturbance area. However, the Chuckwalla DWMA, which overlaps with the designated critical habitat, provides a better delineation of DT suitable

habitat, and the DWMA does not extend into the Project disturbance area. Critical habitat boundaries are adjusted to follow section lines and may contain both suitable and unsuitable habitat, whereas DWMA boundaries follow habitat suitability and are not adjusted. The 183-acre area is low-quality habitat that does not meet most of the criteria for DWMA designation, nor does it meet several primary constituent elements used to define DT critical habitat. The DT population density on site is very low. The Project's impact on low-quality DT habitat will be mitigated to less than significant through implementation of avoidance, minimization, and mitigation measures.

DT and MFTL home ranges are small in relation to the 3,870-acre disturbance area. Acquired land for habitat mitigation may provide opportunities for DT and MFTL dispersal elsewhere to help minimize the Project's significant impacts to DT and MFTL dispersal. Two Western burrowing owl pairs, a CDFG State Species of Special Concern, and eight active burrows were observed within the disturbance area; impacts can and will be mitigated to below significance.

Each of the cumulative projects will be required to mitigate their own biological impacts. However, the stress on species whose habitats are shrinking due to development activities will continue. Further, the numerous large project sites will cumulatively affect wildlife dispersal.

1.3.3 Cultural Resources

With implementation of planned additional investigations and appropriate mitigation measures, Project impacts on cultural resources would be expected to be less than significant. Based on archival research, systematic field survey, and consultation with interested parties, 46 newly identified archaeological sites, and four built (historic) resources were inventoried. None of the built resources are significant. There is the potential for significant impacts at six archaeological sites that are considered potentially significant resources under CEQA. These sites will also need to be assessed under the requirements of Section 106 of the National Historic Preservation Act (NHPA), which will require subsurface investigations.

Potential adverse effects to the six archaeological sites under the NHPA would be addressed through California Archaeological Resources Identification and Data Acquisition Program: Sparse Lithic Scatters or consultation between BLM, State Historic Preservation Officer, and interested parties. If unanticipated archaeological and/or historical resources are discovered during construction, Project construction activities will be halted in the immediate vicinity so that the significance of these resources can be evaluated and appropriate mitigation measures implemented, if deemed necessary.

1.3.4 Geologic Resources and Hazards

The Project will not have significant adverse impacts on geologic hazards or resources. No major unique geologic or physical features have been identified in the Project area. Like much of the rest of southern California, the Project site is located in Seismic Zone 4, the zone with the highest seismicity. No active fault zones are present within the Project boundaries or within a 2.5-mile radius of the site but all Project structures will be designed to meet the strict seismic design standards established for Seismic Zone 4.

No evidence of ground subsidence (e.g., fractures possibly caused by historic groundwater extraction) has been documented at the Project site, although the site is in an area considered to be susceptible to subsidence. Given the high historic use of local groundwater resources for agricultural development with no subsidence reported, it is not anticipated that the Project's limited pumping program will induce subsidence below the site.

1.3.5 Hazardous Materials Handling

The PSPP would have no significant hazardous materials handling-related impacts. The Project will be designed, constructed, operated, and maintained to ensure the safe use and storage of hazardous

materials and in compliance with applicable laws, ordinances, regulations, and standards. A wide variety of accident prevention and mitigation programs, plans, and procedures will be implemented, including hazards assessments, process management systems, release prevention and emergency response programs, employee training, and adherence to sound professional design standards and operating procedures.

Hazardous materials that will be used during Project operations include the solar HTF (Therminol VP-1™, a synthetic hydrocarbon), propane, diesel fuel, mineral insulating oil, and lube oil, among others. It is important to note that solar power plants use fewer hazardous materials than combined-cycle or other fossil-fuel fired power plants.

1.3.6 Land Use

Project land use impacts would be less than significant. The Project site is located almost entirely on BLM-managed public lands within the California Desert Conservation Area (CDCA), and is managed under the CDCA Plan (1980) as amended. The site is classified as Multiple Use Class Moderate by BLM, which allows energy and utility development, but a CDCA Plan Amendment will be required because the Project was not identified in the existing Plan. The Project is not within and would not be expected to significantly affect designated wilderness areas, National Parks, DWMAs, ACECs, or recreational areas. A small portion (less than 200 acres) of the site is within the very fringe of the Chuckwalla unit of designated DT critical habitat that extends north of the I-10. However, that area was surveyed in 2009 as low-quality DT habitat and does not exhibit most of the characteristics that define critical habitat.

The single 40-acre private parcel within the site is designated as Open Space Rural by Riverside County and solar energy is an allowable use within the applicable zone. When considering this single parcel, because the Project would be an energy facility developed in a currently undeveloped desert area, the Project may not be consistent with current County General Plan policies that require that new land uses be compatible in scale and design with surrounding land uses. However, County personnel have indicated that the County's ongoing General Plan update will take into account the County's extensive solar energy resource. In anticipation of this General Plan update, the Project is expected to be compatible with the updated General Plan.

There are two residences within one mile of the Project site. These nearby land uses may be temporarily inconvenienced by noise, dust, and traffic during Project construction. However, there would be minimal impacts on nearby uses during Project operation.

Cumulatively, the proposed Project and other renewable energy projects will unavoidably alter the land use patterns of portions of eastern Riverside County along the I-10 corridor. However, these changes are compatible with Federal legislation (e.g., Energy Policy Act of 2005), Department of Interior policy (orders issued by the last two Secretaries of the Interior), as well as State law and policy (e.g., AB 1078, that sets Renewable Portfolio Standards and gubernatorial Executive Orders), all of which recognize the need to utilize the solar energy resource of the California desert.

1.3.7 Noise

Project noise impacts would be less than significant. The Project site and surrounding areas are remote and except for the I-10, almost entirely open space with some agriculture (Cocopah Nursery) and few noise sensitive receptors. There are two residences within one mile, one adjacent to the site boundary and about 1,000 feet from the edge of a solar field, and the other approximately 3,500 feet north of the site boundary near the nursery.

Temporary construction noise would be generated from Project construction activities and the two nearby residences would experience short-term elevated noise levels particularly when construction activities are

in the northwestern corner of the site, the area closest to the residences. Operational noise from the Project would result from the daytime power plant operation activities. The predominant noise-generating equipment are located in the power blocks near the center of each unit in the interior of the Project site. The modeled daytime operational plant noise levels are estimated to attenuate over a distance of approximately 6,000 feet to approximately 42 decibels (dBA) Equivalent Continuous Noise Level (Leq) (approximately 42 dBA Community Noise Equivalent Level) at the nearest residence.

The County noise ordinance sets Sound Level Limits not to exceed 45 dBA during day and night hours for rural residential properties. The daytime operational Project noise was estimated at 42 dBA Leq at the residence; the nighttime plant noise would be substantially less, as the Project would be in shutdown mode with its noisiest components not operating. Comparing the Project's estimated noise level at night and the lowest measured L90 of 29 dBA at the quietest time of the night (4:00 A.M.) would be less than the CEC's significance criteria of 5 dBA above the lowest measured L90 at any noise sensitive receptor.

1.3.8 Paleontological Resources

With implementation of planned mitigation measures, the Project would have no significant impacts on paleontological resources. A comprehensive records search and literature review indicated that no fossil localities have been previously recorded in the Project area. No fossils were observed on the surface during the Project paleontological field survey. However, the underlying geology includes an area in the northeast portion of the site that is of high sensitivity for paleontological resources (the area closest to Palen Dry Lake), and the remainder of the Project site is of paleontological sensitivity ranging from low to high with increasing depth. The planned mitigation includes a comprehensive professionally-prepared monitoring and mitigation plan approved by the agencies before construction; monitoring during excavations in locations of high paleontological sensitivity; and appropriate data recovery of fossil materials encountered, if any.

1.3.9 Public Health

Project public health impacts would be less than significant. The focus of the analysis is human exposure to toxic air contaminant (TAC) emissions associated with Project operation. The nearest residential receptor is located adjacent to the Project site boundary but 1,000 feet away from the nearest Project equipment (edge of a solar array). No appreciable quantities of TACs are expected to be emitted from the equipment in Unit #1 or Unit #2. Estimated cancer risks at all receptors in the health risk analysis were very low, with a worst-case cancer risk of 0.11-in-one-million at the maximum exposed individual residential receptor, which is significantly lower than the Best Available Control Technology for air toxics threshold of 1-in-one million. All estimated health impacts were below the SCAQMD significance criterion of 10-in-one-million for cancer risk and one for non-cancer chronic and acute health impacts. Based on results of the risk assessment, Project operation poses an insignificant incremental cancer risk and non-cancer health risk impact, according to established regulatory guidelines.

1.3.10 Socioeconomics

Project construction and operation would not result in significant adverse socioeconomic impacts. The Project construction workforce would average 566 workers over a 39-month period, with a short-term peak of 1,141. Most non-local construction workers are expected to commute rather than relocate to the Project area for an extended period of time. The nearest residential opportunities or amenities are in Blythe about 40 miles to the east on I-10 or Coachella and Indio both about 60 miles to the west. Some workers may use campgrounds, RV parks, or motels in the Blythe or Indio areas; housing vacancy rates also are high in these communities. Project population and housing impacts would be very small, and no significant impacts are expected on local public services or utility services during construction.

The Project's 134 operation workers would not significantly adversely affect socioeconomic conditions. The Project site is in a remote, very lightly populated area and there would be no disproportionate impacts on minority or low-income populations (adverse environmental justice impacts).

The Project would have substantial beneficial socioeconomic impacts. PSCP construction and operation employment would provide additional income to Riverside County and other nearby areas, as would local expenditures for materials and services. The Project also would be beneficial from a broader societal perspective by ensuring an adequate supply of electrical power to fuel the State's economy, and helping California meet its Renewable Portfolio Standard and GHG emissions reduction goals.

It is possible that the many solar projects proposed in the I-10 corridor of eastern Riverside County could have cumulative socioeconomic impacts on housing and other socioeconomic resources. Impacts would depend on which proposed projects actually reach construction and when construction takes place. Even though the eastern Riverside County area is currently experiencing difficult times, if all cumulative projects were to be developed as currently planned, there is the potential of a period (a few years between roughly 2012 and 2014) where the cumulative demand for housing, and services of all kinds might somewhat strain the infrastructure, services, and communities of Blythe and vicinity in eastern Riverside County.

1.3.11 Soils

The Project would not have significant impacts on soils. The Project is not located on agricultural lands, there is little likelihood of encountering contaminated soils during construction, and there will be no import or export of fill material. No soils data are available from any known source for the Project site and the Applicants are developing soils maps and other detailed soils data as part of the ongoing geotechnical investigation program. These data will be provided to the regulatory agencies and other stakeholders when the geotechnical investigation is complete.

The site will be graded as part of construction. With the implementation of best management practices (BMPs), such as the use of straw bales and silt fences, limiting exposed areas, and implementing measures to control dust, soil erosion impacts during construction should be less than significant. Likewise, BMPs and dust control measures will be implemented to minimize water and wind erosion impacts during Project operation. BMPs will be provided in the Storm Water Pollution Prevention Plan (SWPPP) and Draft Erosion and Sedimentation Control Plan (DESCP) required for the Project. A preliminary draft construction SWPPP/DESCP is provided in Appendix L.

1.3.12 Traffic and Transportation

The Project's traffic and transportation impacts would be less than significant. Peak construction (1,140 workers and their commuting vehicles) will increase traffic volumes on the I-10, the primary access to the Project vicinity, but current and expected future volumes are light and the increased traffic would not affect traffic flow conditions. The few other local roadways in the area would be unaffected. Site access will be from the I-10 interchange at Corn Springs Road, an existing stop sign-controlled diamond interchange. Corn Springs Road will be improved and extended about 1,350 feet into the Project site. Traffic operations at the intersection of the westbound I-10 off ramp at Corn Springs Road would be congested (Level of Service E) during the morning peak period only at peak construction, if all 1,141 workers were to start work at the same time. However, with Applicants proposed mitigation that would reduce peak employee vehicle volumes substantially (van pools, park and ride, shuttle buses, etc., or staggered shift start times), the intersection would operate at an acceptable level.

The total work force of 134 people associated with 24-hour/seven days a week Project operation would have minimal traffic impacts. The Project would have minimal impacts on rail traffic (maximum of a few rail deliveries during construction). The Project also is not near an airport and would not include structures of sufficient height to interfere with aviation activities; thus aviation impacts would not be significant.

A substantial number of large renewable energy projects are proposed in the I-10 corridor and, if construction schedules overlap, the cumulative increase in traffic volumes along I-10 would be sizable (perhaps as many as 4,000 workers involved in energy construction in the area). There is ample remaining capacity on I-10 and there is no other project close enough to the PSPP site to need to use the I-10 Corn Springs Road interchange. Thus, the Project would not have cumulatively considerable traffic and transportation impacts.

1.3.13 Transmission System Safety and Nuisance

The Project's transmission line safety and nuisance impacts would be less than significant. Analyses indicate that neither Project construction nor operation would result in significant increases in electromagnetic fields levels or audible noise. Because the Project transmission system will conform to applicable California Public Utilities Commission and other regulatory requirements, induced current and voltage are unlikely to lead to hazardous electrical shocks. Although corona caused by power lines can cause interference with radio and television reception, the Project will be connected at 230 kV and corona effects typically are associated with voltages over 345 kV. Therefore, no corona-related design issues are expected. Due to the remoteness of the Project electric transmission facilities, no adverse effects to local communication networks are anticipated. Project design and construction will adhere to standards and procedures that minimize the likelihood of interference with aircraft communications or avionics.

1.3.14 Visual Resources

Project visual resources impacts would be less than significant. During the Project construction period, construction activities and construction materials, equipment, trucks, and parked vehicles, all potentially may be visible on the Project site, and along linear facility routes. These represent changes to the visual environment, but because they will be moderate in intensity and temporary in duration, impacts are considered less than significant.

The completed Project will change the visual appearance of the area but when viewed from eye level, during most hours of the day, the solar field would be relatively unobtrusive, with the power block visible above the solar field. Power block structures would have neutral colors and non-reflective surfaces to minimize their contrast with the natural background. From elevated locations, because of the movement of the sun and the changing orientation of the mirrors to track the sun's movement, the view would change over time. In afternoon hours when viewed from distant elevated locations to the southwest, the reflective surface of the mirror would be oriented toward the viewer. At these times, on a sunny day, the solar array would create a visual impression that more closely resembles a body of water than a power plant or other industrial facility because the array would be reflecting the blue sky. On a cloudier day, the visual impression would appear grayer. In the morning hours viewed from the same elevated locations to the southwest, viewers would have the non-reflective backs of the mirrors toward them, in which case the visual contrast with the surrounding environment would be considerably less. Finally, viewers may find this facility that will contribute to important societal goals (providing renewable energy and reducing GHG visually interesting.

1.3.15 Waste Management

Project waste management impacts would be less than significant. Construction and operation will generate relatively modest quantities of non-hazardous solid waste (e.g., HTF-contaminated soils), liquid waste (e.g., residual solids from treatment of small quantities of makeup feed water), and small quantities of hazardous waste (e.g., used hydraulic fluids). Where practicable, waste materials will be recycled or reused. Project procedures and personnel training will ensure that waste generation is minimized, and that wastes generated are managed appropriately. Disposal of Project wastes will not significantly affect the capacity of available waste disposal facilities. HTF-contaminated soil will be managed in an onsite land treatment unit permitted by the Colorado River Basin Regional Water Quality Control Board. A

Phase I Environmental Site Assessment did not identify any recognized environmental conditions on the Project site.

1.3.16 Water Resources

The PSPP would not have significant impacts on either groundwater or surface water resources. The Project is a dry-cooled facility that will use about 300 afy of groundwater from two onsite wells for all operational activities, including mirror washing (the largest use, accounting for more than one-third of the total). During construction, the PSPP will use an average of approximately 480 afy over a 39-month period. As discussed in Section 4.0, Alternatives, there is no feasible water supply option other than groundwater.

The Project would not have significant impacts on groundwater or surface water resources. The PSPP overlies the Chuckwalla Valley Groundwater Basin. Historical data show that the water table has been stable in the Project vicinity for the last 40 years. Numerical groundwater modeling revealed that pumping from Project construction and operation would not significantly impact offsite water supply wells within a one-mile radius of the PSPP. The Department of Water Resources estimated that the recoverable storage within the Chuckwalla Basin is about 15 million acre feet. The proposed annual use of 300 afy is a very small fraction by comparison. Project use would not put the basin into overdraft or cause a significant drawdown in the regional water table.

Project surface water impacts also would be less than significant. Impacts to a number of ephemeral washes within the Project site will be mitigated by rerouting the washes in two new channels around the east and west sides of the facility and one through the center of the site (between Units #1 and #2). The new channels will be revegetated with native vegetation, designed to be wildlife friendly, and drainage downstream of the site restored as best as possible to their pre-existing condition. SWPPP and a CEC-mandated DESCP, which contain BMPs, will be implemented to avoid significant drainage/stormwater runoff and water quality impacts.

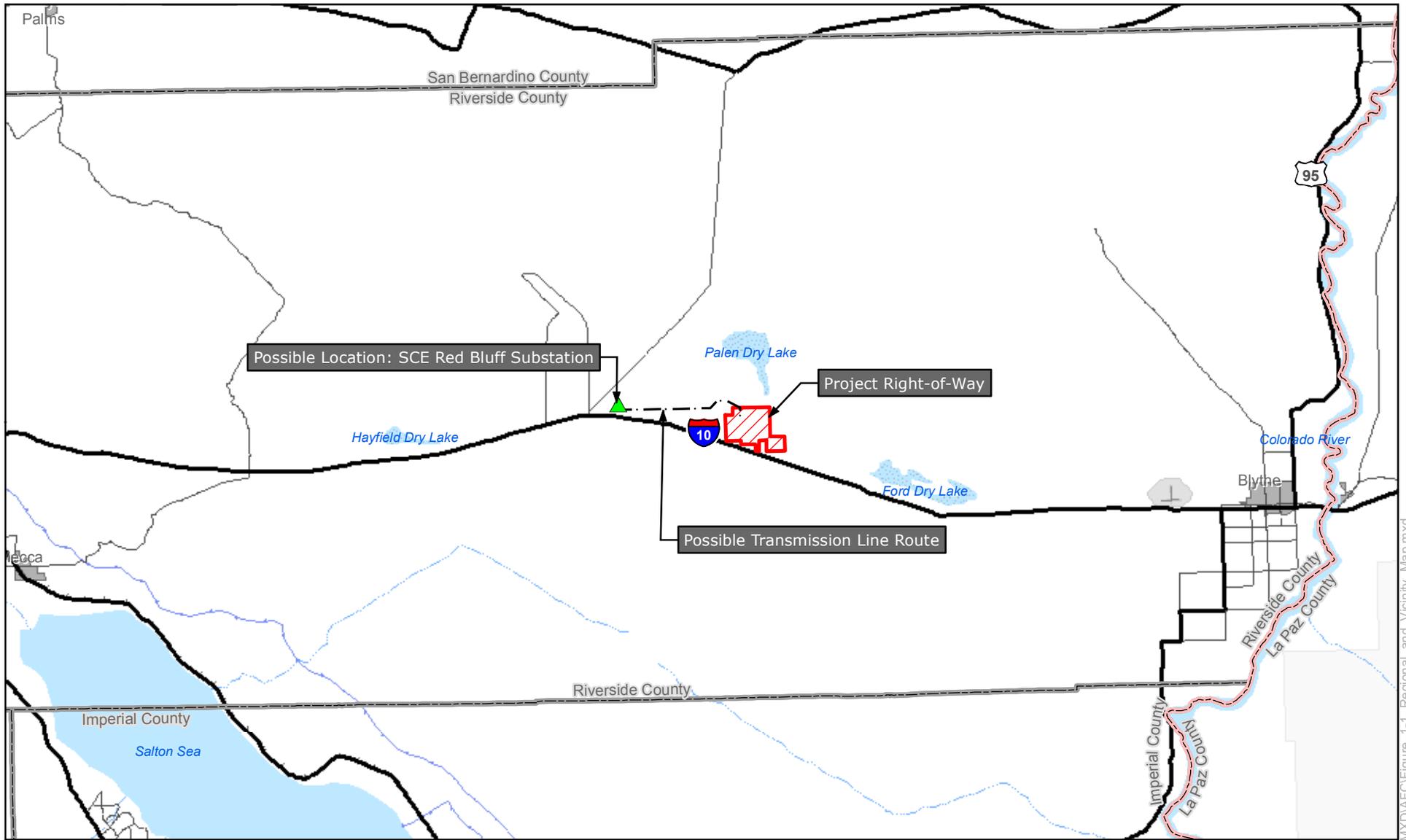
The various cumulative projects in the Project vicinity potentially could consume substantial amounts of water, particularly the solar thermal technology projects that propose wet cooling and the pumped storage project at Eagle Mountain. The individual projects would undergo separate environmental review and would have to address their water needs and impacts separately. Since the PSPP will be dry cooled, the Project's impacts would not be cumulatively considerable.

1.3.17 Worker Safety

Comprehensive worker health and safety programs will be implemented at the PSPP and these, combined with standard good practices in Project design, construction, operation, and maintenance, will ensure that worker safety impacts would be less than significant. Project construction and operation may expose workers to physical and chemical hazards. During both construction and operation, the Project will implement appropriate safety and administrative procedures, safety training, use of personal protective equipment, and compliance with applicable health and safety-related regulations. Injury and Illness Prevention Plans will be central to reducing worker hazards during both construction and operation. Site-specific Fire Protection and Prevention and Emergency Action Plans also will be implemented during both construction and operations.

1.4 Conclusion

In conclusion, the PSPP will not have a significant impact on the environment. The Project has been carefully designed to avoid impacts and will provide a substantial benefit to the State and the nation in meeting renewable energy and other goals. The remainder of this Application for Certification provides the information and analyses needed for the CEC and BLM to arrive at this conclusion.



Legend

-  Project Right-of-Way
-  Possible Transmission Line Route
-  Possible Location: SCE Red Bluff Substation

1:600,000



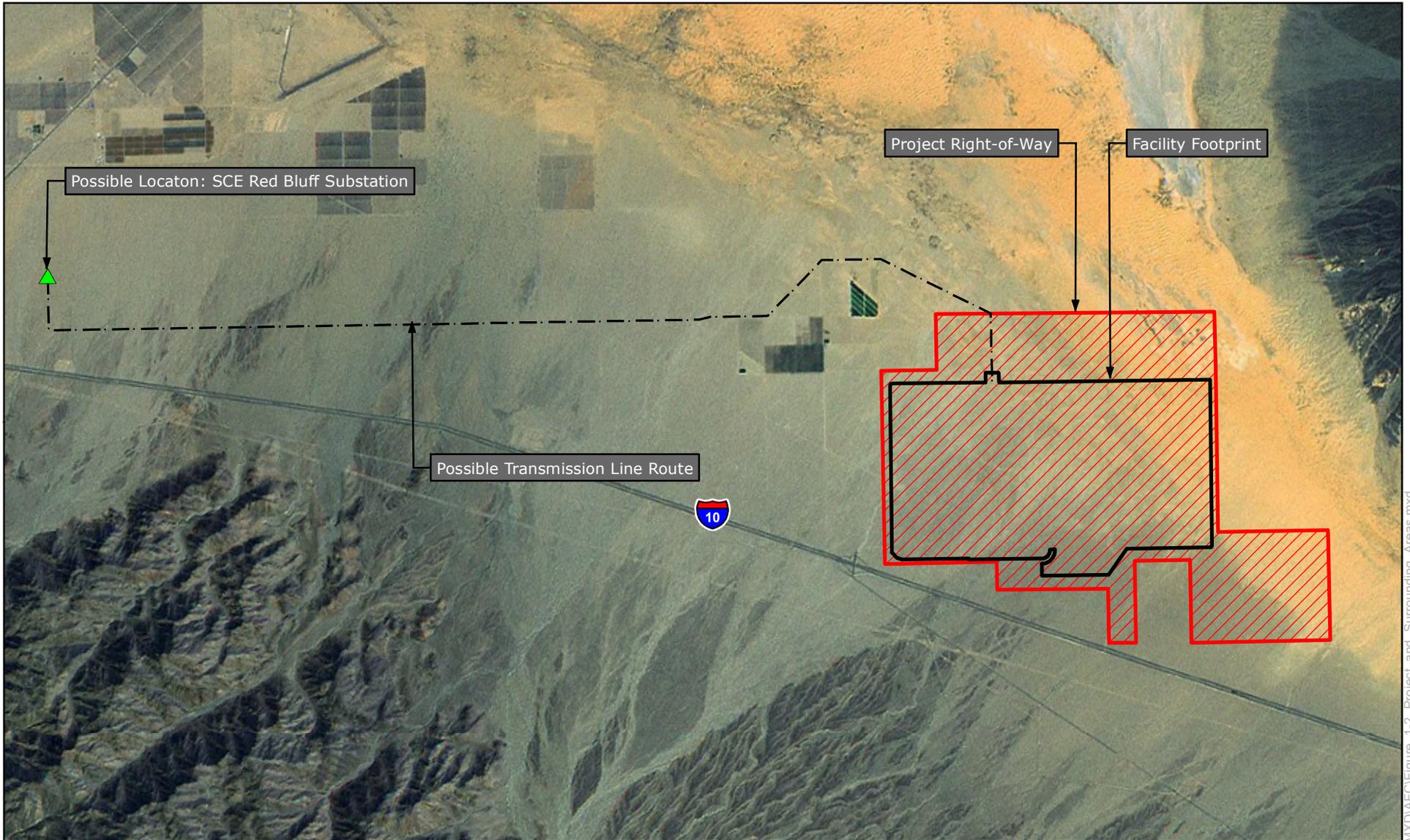
0 5 10 15 Miles



Palen Solar Power Project
Figure 1-1
Regional and Vicinity Map




Date: August 2009



Legend

-  Project Right-of-Way
-  Facility Footprint
-  Possible Transmission Line Route
-  Possible Location: SCE Red Bluff Substation

1:80,000

0 1 2 3 Miles



Palen Solar Power Project
Figure 1-2
Project Site and Surrounding Area




Date: August 2009