

2. Sempra Presidential Permit and Related Facilities

In the January 3, 2008 Draft EIR/EIS, the CPUC and BLM evaluated a range of projects to determine whether they are so closely related to the Proposed Project as to be considered “connected actions” under the National Environmental Policy Act (NEPA). Projects that are considered “connected actions” under NEPA (40 C.F.R. 1508.25(a)(1)) include actions that:

- (i) are automatically triggered by the proposed action,
- (ii) cannot or will not proceed unless the proposed action occurs first or simultaneously, or
- (iii) are interdependent parts of a larger action and depend upon the larger action for their justification.

As a result of this evaluation, the January 2008 Draft EIR/EIS determined two projects to be a connected and an indirect effect of the wind generation in northern Mexico, which the CPUC and BLM determined cannot or will not proceed unless the Proposed Project (or a northern or southern route alternative) is constructed first or simultaneously. The Draft EIR/EIS identified these projects as follows:

1. A 250 MW wind project called “Rumorosa Wind Developers II (RWD)” (including a transmission line to the U.S.), which was evaluated as a potential “indirect effect” of the Sunrise Powerlink Project. Analysis of the RWD project was based on the CEQ Guidance on NEPA Analyses for Transboundary Impacts.
2. The Jacumba Substation, required to interconnect Mexican generation to the CAISO transmission system via the existing Southwest Powerlink (SWPL) transmission line, which was evaluated as a “connected action.”

As a result of information that became available after completion and publication of the Draft EIR/EIS, the analysis presented in the Draft EIR/EIS has been revised. Changes in analysis are based on the following facts:

1. Sempra Generation filed an Application for Presidential Permit (APP) with the U.S. Department of Energy (DOE) in late December 2007 and an Addendum to the application in March 2008. These documents describe the Sempra La Rumorosa Wind Energy Projects as having the capacity to generate up to 1,250 MW, much larger than the 250 MW wind project evaluated in the Draft EIR/EIS. The La Rumorosa Wind Energy Projects described in the APP are also in a new location closer to the United States than the project described in the Draft EIR/EIS. The APP also identifies a transmission line route and substation location different from those considered in the Draft EIR/EIS.
2. SDG&E, in response to CPUC/BLM data requests, provided additional information on the substation in the U.S. as well as a new 69 kV transmission line and communication tower that would be required to interconnect the Sempra wind project, as well as rebuilding and increasing the size of the Boulevard Substation. Because SDG&E is the transmission operator, SDG&E, not Sempra Generation, controls the final location and operation of the transmission system and substation related to the Sempra project.

The 1,250 MW Sempra wind project is evaluated in this Recirculated Draft EIR/EIS as part of the Proposed Project because the electricity generated by the new wind turbines in Mexico is dependent on the addition of transmission capacity to the SDG&E transmission system in the Jacumba area. The SWPL does not have adequate capacity to carry this load. The Sunrise Powerlink or an alternative 500 kV transmission line, built along either the proposed route or one of the southern routes, would be required to transmit the wind energy. Therefore the components required for the wind project in the United States are considered to be “connected actions” and the components in Mexico are evaluated as indirect effects of the Sunrise Powerlink Project.

Figure 2-1 illustrates the components of the Sempra and SDG&E projects, illustrating those components analyzed in the January 2008 Draft EIR/EIS and those considered in this document.

Approach to Impact Analysis. The analysis in this section replaces two sets of analysis presented in the January 2008 Draft EIR/EIS: (1) the Connected Action – Jacumba Substation and (2) Indirect Effect – La Rumorosa Wind Developers II. These actions were described in Draft EIR/EIS Sections B.6.1.4 and B.6.2 (Project Description). The impacts of the two components were analyzed in Sections D.2 through D.15.

These projects are evaluated in the EIR/EIS for the benefit of decisionmakers and the public as part of the whole of the action. However, approval of the Proposed Project (or a northern or southern route alternative) would not result in automatic approval of either the Sempra or the SDG&E projects identified below. The SDG&E project would require separate applications to the CPUC, followed by preparation of project-level environment documents and separate approvals from the CPUC prior to permitting and construction. The Sempra project is subject to approval from the U.S. Department of Energy (DOE) of its Application for a Presidential Permit and completion of all necessary environmental review. The Sempra project would also need to comply with Mexican laws and regulations for those components located in Mexico.

The mitigation measures presented below for the portions of the project in Mexico are not within the responsibility or jurisdiction of the CPUC or BLM and cannot be required by these agencies. They are identified below as recommended measures that should be adopted by the agency responsible for approving the Mexican portion of the project.

A summary table at the beginning of each of the impact analysis for each issue area summarizes the impact conclusions for the Jacumba Substation and La Rumorosa Wind Developers II, as analyzed in the Sunrise Draft EIR/EIS from January, 2008, as well as the impact conclusions for the recirculated Sunrise EIR/EIS Sempra Presidential Permit and Related Facilities. The recirculated Sunrise EIR/EIS Sempra Presidential Permit and Related Facilities would introduce 9 new significant and unmitigable (Class I) impacts to biological resources, visual resources, land use, cultural resources, and fire and fuels management. It would also reduce one significant and unmitigable (Class I) visual impact.

2.1 Description of Sempra and SDG&E Components

On June 30th, 2007, Sempra, the parent company of SDG&E, entered into an agreement with Cannon Power Corporation of San Diego to develop a wind project near the town of La Rumorosa in the municipality of Tecate. On December 20, 2007, Sempra Generation filed an Application for Presidential Permit (APP) for an entity called Baja Wind U.S. Transmission, LLC to construct a transmission line that would connect the Sempra La Rumorosa Wind Energy Projects (RWEP) with the existing Southwest Powerlink (SWPL) transmission line. On March 19, 2008 Sempra Generation filed an Addendum to the Application for Presidential Permit (APP) with additional details of the project.

Figure 2-1. Overview of La Rumorosa Wind Options
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~~The RWEP is being evaluated in the Sunrise Powerlink Project EIR/EIS because of the agreement that was signed between Sempra Generation and SCE in which Sempra Generation has agreed to sell SCE up to 250 MW of power from the La Rumorosa wind power facility under development (Sempra, 2007).~~

As illustrated in Figure 2-2, Figure 2-3 and Figure 2-4, the Sempra/SDG&E projects analyzed in this EIR/EIS consist of the following components:

- Sempra La Rumorosa Wind Energy Projects (Sempra RWEP): up to 1,250 MW of wind generation in Mexico
- Sempra Transmission Line: a double circuit 230 or single circuit 500 kV transmission line from Mexico to the U.S.
- SDG&E Jacumba Substation: a 500/230/69 kV substation located east of the town of Jacumba
- SDG&E 69 kV Transmission Line: a new 13.4-mile transmission line connecting the SDG&E Jacumba and Boulevard Substations
- SDG&E Boulevard Substation Expansion: reconstruction from 1/4 to approximately 1 3/4 acres
- SDG&E Communication Facility: located in eastern San Diego County.

Description of La Rumorosa Components

Sempra RWEP (Mexico)

In the APP, Sempra Generation described the La Rumorosa Wind Energy Projects which would encompass up to 1,250 MW of wind power in the vicinity of the town of La Rumorosa, in northern Baja California. The RWEP would be constructed in phases, with the first phase estimated to be on line by 2010, and the final phase being completed and on line in 2013.

The RWEP is located less than 1,000 feet north of the town of La Rumorosa, Baja California (See Figure 2-3). La Rumorosa is approximately 70 miles southeast of San Diego in Mexico. The RWEP would generate up to 1,250 MW of power and would be installed along the eastern side of the Sierra de Juárez Mountains (Sempra, 2007). Ricardo Moreno, the Director of the International Public Relations of Sempra Energy México, stated the wind project would use 2.5 MW turbines for its first phase (Excelsior, 2008). Assuming the use of 2.5 MW turbines, the 1,250 MW project would require 500 turbines. Sempra has identified an area of 7,500 acres within which the RWEP would be located.

Sempra Baja Wind Transmission Line (Mexico to U.S.)

In the APP, Sempra Generation proposed the construction of a 500 kV transmission line that would interconnect the 1,250 MW wind project located in Baja California with the existing SDG&E SWPL transmission line in San Diego County. Approximately three miles of either 230 or 500 kV transmission line would be required to interconnect the RWEP with the Jacumba Substation; one mile of the transmission line would be located in the United States and approximately two miles of the line would be in Mexico. In the Addendum to the Application (filed March 19, 2008) Sempra Generation indicated the potential to cross the U.S.-Mexico border with a double circuit 230 kV option. For analysis purposes, this transmission line will be called the Baja Wind Transmission and will include the transmission line in the United States and in Mexico.

In the Addendum APP, Sempra Generation offered a preferred route for a double circuit 230 kV transmission line and a preferred route for a single circuit 500 kV. The new transmission line would go north, northwest from the RWEP in Mexico then cross the U.S.-Mexico border at approximately 0.5 miles west of the San Diego/Imperial County line. Specific details about the transmission line in Mexico

are not known. Sempra Generation is proposing two route options for the Baja Wind Transmission once in the United States – Route A1 and Route A2, as labeled in Figure 2-3. The border crossing would be the same with both the routes. Route A1 is Sempra’s preferred route for a single circuit 500 kV transmission line. It would head north-northwest for approximately 1 mile until reaching the 500 kV and loop into the substation approximately 0.5 miles south of both Interstate 8 and Old Highway 80. Route A2 is the preferred route for a double circuit 230 kV transmission line. It would head northwest from the border crossing for approximately 0.7 miles then head north for approximately 0.3 miles until reaching the 230/500 kV loop in substation approximately 0.5 miles south of both Interstate 8 and Old Highway 80. The two route options are illustrated in Figure 2-3.

According to the Addendum to the Sempra APP, steel lattice towers standing approximately 150 feet tall would be used for the transmission line. These structures would be installed approximately every 1,300 feet depending on site conditions (i.e., terrain, roadways, utilities; etc.) and transmission line alignment. The 3 miles of new transmission line would require approximately 12 to 15 new towers (four or five of which would be in the United States).

Construction of the transmission line would involve the installation of foundations, erection of the lattice towers, and cable pulling, tensioning, and splicing. The Baja Wind Transmission Line would require a 214-foot permanent right-of-way (ROW), and a 314-foot temporary ROW. Lattice towers would be anchored to a concrete foundation approximately 3 to 6 feet in diameter at each of the four corners of the base. Temporary disturbance around each tower structure site resulting from construction activity would be approximately 150 by 200 feet (0.69 acres) for a 500 kV lattice tower and 120 by 160 feet (0.44 acres) for a 230 kV lattice tower for a total of 5.28 to 10.35 acres; permanent disturbance at the tower sites would not exceed 50 feet by 50 feet for a total of 0.6 to 0.9 acres of permanent disturbance. Additional temporary disturbance would occur as a result of construction access roads and cable pulling, tensioning, and splicing sites. There are existing access roads near Routes A1 and A2, however it will also be necessary to construct short, unpaved access spurs from the access roads to the base of the transmission structures.

SDG&E Jacumba Substation

According to the Sempra APP, a 230/500 kV substation would be required to interconnect the Baja wind generation with the SWPL 500 kV transmission line. In correspondence to the CPUC/BLM in May of 2008⁷, SDG&E clarified that because SDG&E is the transmission operator, SDG&E would define the final location and operation of the transmission system including the new substation. SDG&E would build this substation approximately 4 miles southeast of the location analyzed in the Draft EIR/EIS, in the a location slightly west of the location defined in Sempra’s APP. SDG&E would add a new 69/230 kV substation yard and adjacent a 500 kV substation yard slightly west of ~~to~~ the 230/500 kV substation that Sempra identified in its APP. For analysis purposes, the entire 69/230/500 kV substation is called the Jacumba Substation (although SDG&E states that it will eventually be called the East County Substation). Figure 2-2 illustrates the location and preliminary components of the Jacumba Substation.

According to SDG&E, the electrical facilities to be installed in the Jacumba Substation include 500kV, 230kV, and 69kV air-insulated electrical buses, steel support structures, transformers, capacitors, reactors, circuit breakers, disconnect switches, communication equipment, control equipment, and protective relays. Other facilities will include metering, Supervisory Control & Data Acquisition (SCADA), security, and communications equipment. Two single-story relay/control buildings, a single-story storage building, and a fire prevention system with associated hydrants and an approximately 300,000-gallon water tank would be installed, as well as a gas generator, to be used as a backup to the station lights and power transformers. The substation equipment would be fully contained within a fenced area. Figure 2-5 illustrates the preliminary general arrangement for the Jacumba Substation.

Figure 2-2. Revised SDG&E Jacumba Substation

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Figure 2-3. Sempra Rumorosa Wind Energy Projects and Baja Wind Transmission

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Figure 2-4. New SDG&E 69 kV Transmission Line and Expanded Boulevard Substation

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Figure 2-5. Jacumba Substation: Preliminary General Arrangement

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The Jacumba Substation would encompass 62 acres, but construction would disturb a total of approximately 85 acres including slopes, drainage, roads, and a buffer zone. It would provide the Baja Wind Transmission Line with interconnection to the existing SWPL transmission line. Based on the current design, the electrical facilities to be installed include 500kV, 230kV, and 69kV air-insulated electrical buses, steel support structures, transformers, capacitors, reactors, circuit breakers, disconnect switches, communication equipment, control equipment, and protective relays.

SDG&E 69 kV Transmission Line

SDG&E indicated that in addition to the Jacumba Substation, a new 13.5-mile 69 kV transmission line would be built to connect the Jacumba Substation with the existing SDG&E Boulevard Substation. The transmission line is illustrated in Figure 2-4. This transmission line would exit the Jacumba Substation on the west north side and then parallel the existing SWPL transmission line for approximately 9.25 miles. The centerline of the 69 kV transmission line would be 150 feet south of the centerline of the existing SWPL. In this segment, the line would cross Old Highway 80 at approximately MP BL-0.5 and again at MP BL-5.75. The line would also cross Carrizo Creek Road at approximately MP BL-1.6, and Carrizo Gorge Road at approximately MP BL-2.5. It would traverse BLM land from MP BL-0.5 to shortly before MP BL-2, and would cross the San Diego & Arizona Eastern Railway at MP BL-3.5 and again MP BL-7.7.

At approximately MP BL-9.25, the new 69 kV transmission line would cross the SWPL corridor and head northwest for approximately 0.15 miles before heading north then north-northeast for approximately 0.64 miles along existing roads. The line would turn north-northwest for approximately 1 mile crossing the San Diego & Arizona Eastern Railway at approximately MP BL-10.3, also along an existing rural road. After MP BL-11, the line would head due east for approximately 0.6 miles crossing Jewel Valley Road. The line would then head north for approximately 0.5 miles along Tule Jim Lane, then jog northwest for 0.2 miles before heading north for approximately 1.16 miles still along Tule Jim Lane to enter the Boulevard Substation.

The new 13.5-mile 69 kV transmission line would require approximately 110 new poles.¹ The 69 kV transmission line would utilize tubular steel poles with an average height of 100’.

SDG&E Boulevard Substation

In its response to CPUC Data Request 31, SDG&E stated that the interconnection of a 69 kV transmission line with the Boulevard Substation would require rebuilding and expansion of the Boulevard Substation. The existing substation would be demolished and a new one built in the same location. The Boulevard Substation is served by one 69 kV transmission circuit and is not designed to accommodate additional circuits. The existing substation occupies less than ¼ acre of land and it is estimated that the work at Boulevard Substation will expand the total substation footprint to just over one ¾ acre, not including slopes, drainage, and buffer. SDG&E would purchase additional land on the northwest east side of the existing Boulevard Substation off of Old Highway 80 in Boulevard.

SDG&E Communication Facility

According to SDG&E, one communications tower would be constructed as a component of the Jacumba Substation project. The tower would use existing communications sites and existing access roads. The

¹ Based on the preliminary design of the new 69 kV transmission line where the average distance between poles is 650 feet (SDG&E Data Response #31).

location of the facility is shown on Figure 2-1. The Jacumba Substation communication would be facilitated via a microwave system that would require the construction of a new communication tower at the substation. The new tower would be as follows:

On an existing communication facility (owned and operated by SDG&E) on an easement located adjacent to ~~At~~ the existing White Star communication facility (owned by San Diego County), SDG&E would install a steel monopole on their existing easement, shorten one existing pole, and remove two existing wood poles. According to SDG&E the pole would be 75 feet tall and would receive the microwave signal from ECO Substation. SDG&E would also lease space on some T1 lines out of White Star in order to intercept the existing communications network at Monument Peak. (SDG&E, 2008)

Assumptions for Analysis of RWEF

As illustrated in Figure 2-3, the Sempra wind project would occupy an approximately 7,500-acre area beginning at the U.S.-Mexico border and continuing south for about 4.6 miles. It would be less than 1,000 feet north of the town of La Rumorosa. According to the Mexican news source El Vigía, the Sempra Subsidiary, Baja Wind, signed a land leasing agreement with the ejidos (community) Jácume and Cordillera Molina, however the exact location of the wind project within the area defined on Figure 2-3 is not known. The land lease with the Cordillera Molina includes roughly 9,900 acres (4,000 hectares) in the vicinity of La Rumorosa and the extent of the land lease with the ejido Jácume is unknown at this time.

Sempra has indicated that in the Phase 1 of the RWEF only 130 to 190 MW of wind energy would be generated, and that the location of subsequent phases of the La Rumorosa projects has yet to be determined. According to the APP Sempra Generation is currently arranging for additional wind resource properties in the vicinity of La Rumorosa. The land that would be occupied by the RWEF is generally characterized by rolling to steep foothills. The area is mostly treeless; however, some coniferous forest occurs in the area and is a highly valued resource (WWF, 2008).

Sempra has said it could begin delivering wind from the first phase of the RWEF to Southern California Edison as early as 2010, and the future three phases of additional 250 MW wind generation projects is expected to be completed by 2013 (according to the APP). Sempra originally believed the RWEF would not require significant transmission upgrades but rather could link into the existing SWPL transmission line (Rose, 2007), however the Addendum to the APP states that since the original Presidential Permit in December of 2007, CAISO has indicated that either the Sunrise Project or other transmission upgrades would be required to deliver energy from the wind energy development in the La Rumorosa area. The RWEF, located in Mexico, would be subject to the Mexican Environmental Regulations, which are summarized below.

Because the specific design of the wind project has not been disclosed by Sempra, in order to evaluate the potential effects of this project, a generic description has been developed for the purposes of impact analysis. This description is presented in the following paragraphs.

Site Testing and Monitoring

Site monitoring and testing is completed before building a wind project and involves collecting sufficient amounts of meteorological data to accurately characterize the wind regime. Meteorological data, such as data on wind speed and direction, wind shear, temperature, and humidity, are typically collected over a period of at least one year. However, some developers may choose to collect data for as long as 3 years. The collected data is used to support decisions on whether the wind resources at a site are suit-

able for development and, the appropriate number, type, and location of wind turbines to incorporate into the facility design.

The collection of meteorological data requires the erection of meteorological towers equipped with weather instruments. These towers can be as high as 165 feet (50 meters). For purposes of the RWEP it is assumed that the area can be adequately characterized with 10 or fewer towers. Meteorological towers are typically metal, lattice-type structures and many are permanently mounted to their own trailers since they are relatively lightweight. As a result, installation of permanent foundations is not required unless the tower will stay in service during operation of the wind facility. Guy wires may be necessary for meteorological towers in very windy areas. Signal cables used during the site monitoring and testing phase are not likely to be buried, unless the tower will remain in service during operation of the wind facility. Remote tower sites may require the construction of minimum-specification access roads (i.e., two-track). During the site testing and monitoring phase, the towers would be unattended except for periodic visits by maintenance personnel. At the end of this phase, the temporary towers would be removed. For this analysis, it is assumed that meteorological towers will be made permanent (i.e., improvement of access roads, installation of foundations, and undergrounding of cabling) during construction of the wind facility.

Wind Facility Design

Because information about site monitoring and testing activities is not available, for purposes of this analysis it is assumed that the sites are viable as demonstrated by the NREL report drawing upon the Kenetech Wind-Power data and Vestas Wind Systems A/S data (2002-2003) (CEC, 2005). The first phase of the RWEP would include the installation of approximately 65 to 75 new 2.5 MW propeller-type turbines during phase one of the project. An additional 350 to 530 new 2 to 3 MW propeller-type turbines would be required in the subsequent phases of the project to achieve 1,250 MW of wind generation. For analysis of this hypothetical project, the 1,250 RWEP is assumed to include the following design and operational elements:

- Maximum rotational speed of turbine rotor blades averages approximately 18 revolutions per minute (rpm) for a 2.5 MW turbine. Rotational speed of a 3.6 MW turbine is variable but averages between 8.5 to 15.3 rpm.
- The turbines would be mounted on enclosed tubular towers. The total height of the turbine and tower structures would likely range from 380 to 440 feet depending on the turbine size, elevation, and topography at each tower location. The rotor-diameter would be approximately 300 feet for a 2 MW turbine and up to 340 feet for a 3.6 MW turbine.
- The total distance from blade tip at the 6 o'clock position to the ground surface would be at least 24 meters, or about 80 feet.
- Siting and spacing of wind turbines depends on site-specific conditions that are influenced by terrain and wind conditions. The ultimate location of turbines would be determined after a detailed analysis of the terrain and wind in the La Rumorosa areas. Turbines would likely be located on ridge-tops and in some areas with sufficient upwind space, multiple rows of turbines could be used. The wake of upwind turbines can substantially diminish the velocity and increase the turbulence at downwind turbines. Where the rows are sufficiently spaced, the losses can be minimized. This project would space the turbines in rows between 8 to 10 rotor-diameters apart.
- The new turbines would not require any guy wire support.

- Maintenance access to the nacelle² will be in the form of ladders inside the towers, accessed from locked doors at the base of the towers.
- The turbine nacelle and rotor design is 3-bladed, with an upwind active yaw³ horizontal-axis configuration, which is the predominant design standard in the wind industry today (Small Wind Energy, 2007).
- All turbine interconnect systems for electrical service will be placed underground.

In addition to the turbine structures, the following facilities would also be required:

- A new 230/500 kV transformer substation would be constructed as part of the RWEPP approximately two miles south of the U.S.-Mexico border.
- A new operation/maintenance facility would be constructed as part of the RWEPP. Depending on the geographical separation of the groups of wind turbines, multiple facilities could be required. Each operation and maintenance facility is assumed to be approximately 5,000 square feet plus parking.
- Access roads would be required for construction and to access the turbine areas and facilities. Spur roads off of the main access roads would also be required to allow access to individual or clusters of turbine sites. Typical access roads would be 30 to 40 feet in width for the construction period, and then restored to widths of 16-24 feet once the construction period is complete.

Construction and Grading

Installation of the new wind turbines associated with the RWEPP would require the grading and construction activities described below.

Each turbine pad would occupy approximately a 40-foot by 40-foot site (or approximately 1,600 square feet), including a concrete pad and drain rock surround, for a total of approximately 20 acres for the 500 wind turbines. During the construction period, relatively flat temporary pads would be constructed at each turbine site to provide a base for construction equipment, including the large crane needed to erect the tower and assemble the turbine. Installation of tower foundations would involve excavations to depths up to 40 feet below grade, with the diameters of excavations being roughly the same as the diameter of the tower base, approximately 15 to 20 feet depending on turbine model selected. Approximately 160 cubic yards of concrete, requiring an average of 6,000 gallons of water, would be required for each tower foundation (BLM, 2005). After backfilling of foundation voids, remaining excavated materials would need to be disposed of offsite or redistributed onsite. Contour grading would be conducted at each turbine pad as needed to match construction grade with the existing grade. The temporary area of disturbance for new turbines is estimated to be approximately one to three acres per turbine, or approximately 1,000 to 1,250 acres (assuming 2 to 3 MW turbines) of which approximately 18.5 acres would be permanent disturbance.

Based on the remoteness of the RWEPP sites, it would likely be necessary to construct a temporary concrete batch plant onsite, especially if haul distances from existing offsite concrete plants are over an hour away (BLM, 2005). Depending on available onsite materials, constituents of concrete (aggregate and sand) may also be hauled to the batching plant. Electrical power would be provided by a portable diesel engine/generator set (nominally 125-kW capacity). Up to 10 acres would be required for a typical

² A nacelle is the body, shell, or casing of a propeller-type wind turbine, covering the gearbox, generator, blade hub, and other parts.

³ A yaw is the movement of the tower top turbine that allows the turbine to stay into the wind.

batching plant. This area would be cleared of vegetation and grading might be required. The soils at the batch plant would be expected to be heavily compacted as a result of plant activities including truck traffic (each wind turbine foundation would require 18 to 20 concrete-hauling truck trips) for a total of up to 10,000 trips. The concrete batch plant would be utilized for other foundations required for the RWEF, including the switchyard and operation and maintenance facilities.

Depending on subsurface stratigraphy, surface soils may need to be excavated, and gravel and/or sand may be imported to establish a sufficiently stable road base. Engineered storm water control may be necessary, and natural drainage patterns are likely to be altered, at least on a local scale. Final grading plans would be developed pursuant to subsequent building permits, and would require approval by the local government and would be subject to local requirements. The length and disturbance resulting from the improvement of existing access roads and construction of new access and spur roads would be dependant upon the final siting of turbine pads within the RWEF site.

Laydown areas would be required for equipment and material staging. The construction of equipment laydown areas would involve removal of vegetation for safety, access, and visibility purposes during lifting operations. Although surface soils may not be removed, some regrading might be required to create relatively level areas, and rock and/or gravel are expected to be laid down to give these areas all-weather accessibility and to support the weights of construction vehicles and staged equipment. The number and size of laydown areas will be subject to the construction contractor's discretion, but could reasonably be assumed to be at least 1.4 acres per wind turbine for a total of 700 to 875 acres.⁴

Trenching would be required for the installation of turbine and switchyard interconnection systems. A minimum three foot trench depth is assumed, requiring a 20- to 40-foot construction right-of-way depending upon topography and the presence of other physical obstacles. The length and area of disturbance resulting from turbine and substation interconnection installation would be dependent upon the final siting of turbine pads.

An interconnection substation would be located near the western end of the RWEF. The substation site is expected to result in an approximate total disturbance of ten to twenty acres. Depending upon substation siting, construction of new permanent access route might also be required.

Site preparation for one or two new operation and maintenance facilities is assumed, equating to an approximate total disturbance of 1.25 to 1.5 acres, including parking areas. Each operation and maintenance site would include an approximately 5,000-square-foot storage facility. Depending upon facility siting, construction of new permanent access routes might also be required.

The meteorological towers that would remain in place during operation of the RWEF would require permanent foundations and access roads, and undergrounding of cables. Each tower site would occupy approximately a 30-foot by 30-foot area (or approximately 900 square feet), including a concrete foundation, drain rock surround, and guy wires. During the construction period, relatively flat temporary pads would be constructed at each meteorological tower location to allow for construction vehicle access, and foundation and tower installation. The total graded area for permanent towers is estimated to be approximately 0.5 acre per tower, of which 0.25 acres would be permanent disturbance. It is likely that fuel would be stored onsite in portable tanks. These tanks are expected to be staged at or near the laydown areas and resupplied throughout the construction period by commercial vendors. The total volume of fuel (primarily diesel fuel) onsite is not expected to exceed 1,000 gallons. No major equipment maintenance is expected to be performed onsite on construction equipment, other than maintenance of fluid levels.

⁴ This assumes a 250 ft x 250 ft area for each turbine, or 62,500 square feet. (Maiden Wind Farm, 2002)

All temporarily disturbed areas, including crane pads, the outside shoulders of all construction access roads, and interconnect and power line rights-of-way would be re-seeded and reclaimed to native vegetation once the construction period is completed.

The final footprint or permanent disturbance of the RWEP is assumed to be 5 to 10 percent of the total acreage of the RWEP sites, approximately 312.5 to 2,125 acres (BLM, 2005). This area does not include the permanent disturbance resulting from the required transmission line to the U.S., the Jacumba Substation interconnect to the grid, the 13.5 miles of new 69 kV transmission line connecting the Jacumba Substation to the Boulevard Substation, or the Boulevard Substation Expansion which are discussed in the previous sections, starting on page 2-3.

Construction Personnel and Schedule

It is assumed that construction of the RWEP would be constructed in four or more phases to accomplish installation of turbines and associated facilities (access roads, interconnections, switchyard, meteorological towers, and operation and maintenance facilities), construction of the 230 or 500 kV transmission line and associated substation, and site restoration. It is assumed that staffing for the construction of the RWEP would require approximately 50 to 75 people to construct each phase of the project and an additional 50 people per phase to support overall construction activities. Construction would occur following completion of the environmental review process, approval of a Land Use Permit, should any forest be removed according to Mexican Environmental regulations, and obtaining all other necessary permits for construction. Each phase would take approximately nine to 18 months to complete. According to Semptra, construction of all phases would occur prior to 2013.

Operations and Maintenance

Upon completion, approximately 25 to 50 full time onsite employees along with a plant manager area assumed to be required to operate the project (IWAG, 2008). Maintenance activities include monitoring operations, securing the site, changing fluids on the turbines, replacing worn parts, and repairing broken equipment. Wastes resulting from wind facility maintenance typically include small amounts of gear oil and lubricating oils from yaw motors or transmission and glycol-based coolants from transmissions equipped with forced-flow radiator cooling loops. Most turbine designers construct their turbines in modular fashion. Thus, it is likely that most major overhauls or repairs of turbine components would involve removing the component from the site to a designated offsite repair facility. Because most towers are equipped with lifting devices of sufficient capacity to lower or raise individual drive train components, a crane should not be needed for such component replacements. In general and with the exception of major overhauls and repairs, maintenance and operations is a low-intensity activity that could be shared with other projects in the area. Major overhauls or upgrades (repowering) of wind turbines would require separate permitting and environmental review.

Mexican Environmental Regulations

The Government of Baja California signed the Environmental Protection Law (Ley de Protección al Ambiente) on November 30, 2001 to complement the already existing Federal Environmental Code (Ley General del Equilibrio Ecológico y la Protección al Ambiente) ratified in 1988. Both laws are dedicated to preserving and protecting the environment, and offer guidelines for the use of natural resources. The Federal Environmental Code sets out pollution prevention and control methods for Mexico. Both Mexican and international companies and facilities are subject to Mexican environmental law.

Mexican Electric Commission

The Mexican Federal Electricity Commission (Comisión Federal de Electricidad, or CFE) is responsible for siting and constructing transmission lines in Mexico. The CFE is subject to regulations that preserve the environmental and historical integrity of the regions traversed by their infrastructure. The CFE is required to identify where their work may be subject to the Federal Environmental Code (Ley General del Equilibrio Ecológico y la Protección al Ambiente), the Law of Sustainable Forest Development (Ley General de Desarrollo Forestal Sustentable), and the Law of Monuments and Archeological, Artistic, and Historic Zones (Ley Federal Sobre Monumentos y Zonas Arqueológicas, Artísticas e Históricas). An Environmental Impact Statement is required by the Secretary of the Environment and Natural Resources (Secretaría del Medio Ambiente y Recursos Naturales) for any siting and construction of transmission lines or substations, and a Justification/Technical Study is necessary to obtain authorization for any change to forested lands (CFE, 2007). Additionally, Sempra identified the Energy Regulatory Commission (Comisión Reguladora de Energía), and the National Ecology Institute (Instituto Nacional de Ecología) as agencies with potential jurisdiction within Mexico (in the APP).

2.2 Biological Resources

2.2.1 Environmental Setting – Biological Resources

Sempra RWEF (Mexico)

The RWEF Wind Farm would be situated near the town of La Rumorosa in the municipality of Tecate. Vegetation communities on the wind farm site were identified by interpretation of the Baja California flora and fauna listing on the official Baja California website. The special status plant and wildlife species with potential to occur (listed below) were determined based on Mexican government records. La Rumorosa is located in the “California” botanical regions, also referred to as the Mediterranean region, but borders on the Central or Sonorens Desert. The climate of the California region is similar to the Mediterranean, characterized by mild, relatively humid winters, and warm, dry summers. Fog constitutes an important factor that affects the biological development of many of the organism within the region. The primary native vegetation communities are believed to be chaparral and pine forests, but some desert communities may be present in lower elevations closer to the U.S.-Mexico border.

The chaparral is characterized by shrubs that are continuously green, have small, hard leaves that can resist extreme periods of drought. The chaparral nearest the La Rumorosa region is the high elevation chaparral that is present at elevation greater than 800 meters, bordering the pine forests of the Sierra de Juárez.

Pine forest vegetation is found primarily in the high mountains with cold temperatures, primarily in the Sierra de Juárez and the San Pedro Mártir regions. The Sierra de Juárez is the most extensive forest in this region with over 340,000 hectares or forest (approximately 840,000 acres). The predominant species within the forests are the *Pinus jeffreyi*, *P. monophylla*, and the *P. quadrifolia* which occupy a large area in the La Rumorosa region, as well as in the Sierra de Juárez, the Sierra de Calamaiué, and the Sierra de San Borja. Juniper forests, specifically the *Juniperus californica*, are also present in the La Rumorosa region, and play an important ecological role.

There are many native species that occur only in Baja California due to its geologic history and period of separation from the rest of the continent. A specific study of the endemic species that are threatened or in danger of extinction has never been completed, and the only known approximation of such species has resulted from regional and U.S. samplings.

Overview of Special Habitat Management Areas. The RWEF Wind Farm is not located in a special habitat management area.

Designated Critical Habitat. Critical habitat is a USFWS designation that does not apply to Mexico.

Special Status Plant Species. The list below presents the rare species; endemic species; and species that are threatened, in danger or extinction, or with special status that have potential to occur at the RWEF Wind Farm (GobBC, 2007).

Scientific Name	Common Name	Status
<i>Abies Concolor</i>	Abeto blanco	Rare
<i>Pinus Jeffreyi</i>	Pino Negro	Special protection
<i>Pinus lambertiana</i>	Pino dulce	Threatened
<i>Pinus monophylla</i>	Pino piñonero	Special protection
<i>Pinus quadrifolia</i>	Pino cuatro hojas	Special protection
<i>Pinus ponderosa</i>	Pino real o blanco	Threatened
<i>Cupressus Montana</i>	Cedro de San Pedro Mártir	Rare
<i>Juniperus californica</i>	Junipero de California	Rare
<i>Cupressus guadalupensis</i>		In danger of extinction
<i>Echinocereus lindsayi</i>		In danger of extinction

Scientific Name	Common Name	Status
<i>Pinus radiata</i> var. <i>cedrocensis</i>		Threatened
<i>Pinus attenuata</i>	Pino costero	Special protection
<i>Calocedrus decurrens</i>	Pino	Threatened
<i>Pinus coulteri</i>	Pino rojo	Special protection
<i>Cupressus forbesii</i>		Rare
<i>Pinus radiata</i> var. <i>binata</i>		In danger of extinction
<i>Pinus edulis</i>	Piñón prieto	Special protection
<i>Pinus muricata</i>	Pino costero	In danger of extinction
<i>Ferocactus johnstonianus</i>		Rare
<i>Ferocactus acanthodes</i> var. <i>acanthodes</i>	Biznaga	In danger of extinction
<i>Ferocactus chrysacanthus</i>		Threatened
<i>Mamillaria setispina</i>		Rare
<i>Lophocereus schottii</i> forma <i>mickleyanus</i>	Cabeza de Viejo	Rare
<i>Mammillaria angelensis</i>		Rare
<i>Cochemiea pondii</i>		Rare

Source: Baja California website.

Special Status Wildlife Species. The list below presents wildlife species that have potential to occur at the RWEP Wind Farm based on Mexican government records. These species may or may not be of special status in Mexico. The PBS, in the U.S., is federally listed as an endangered species and is listed as a threatened species in California. Additionally, the [California condor](#), QCB₂ and barefoot banded gecko may occur in the RWEP Wind Farm area if appropriate habitat is present. [The California condor is federally listed as endangered in the U.S. and is listed as endangered in California.](#) The QCB is federally listed as an endangered species in the U.S., and the barefoot banded gecko is listed as a threatened species in California.

Scientific Name	Common Name
<i>Crotalus viridis</i>	Western rattlesnake
<i>Crotalus enyo</i>	Rattlesnake
<i>Podicepsa auritus</i>	Horned grebe
<i>Podilymbus podiceps</i>	Pied-billed grebe
<i>Phalarocorax penicillatus</i>	Brandt's cormorant
<i>Plegadis chihi</i>	White-faced Ibis
<i>Cathartes aura</i>	Turkey vulture
<i>Cygnus columbianus columbianus</i>	Whistling swan
<i>Anser albifrons</i>	White-fronted goose
<i>Chen caerulescens</i>	Snow goose
<i>Anas cyanoptera</i>	Cinnamon teal
<i>Anas clypeata</i>	Northern shoveler
<i>Mergus Serrator</i>	Red-breasted merganser
<i>Oxyura jamaicensis</i>	Ruddy duck
<i>Pandion haliaetus</i>	Osprey
<i>Circus cyaneus</i>	Northern harrier
<i>Accipiter cooperii</i>	Cooper's hawk
<i>Falco peregrinus</i>	Peregrine falcon
<i>Charadius wilsonia</i>	Wilson's plover
<i>Charadius montanus</i>	Mountain plover
<i>Tringa flavipes</i>	Lesser yellowlegs
<i>Calidris canutus</i>	Red knot
<i>Zenaida asiatica</i>	White-winged dove
<i>Chordeiles acutipennis</i>	Lesser nighthawk
<i>Aeronautes saxatalis</i>	White-throated swift
<i>Selasphorus rufus</i>	Rufous hummingbird

Scientific Name	Common Name
<i>Dendrocopos scalaris</i>	Ladder-backed woodpecker
<i>Tyrannus verticalis</i>	Western kingbird
<i>Contopus sordidulus</i>	Western wood pewee
<i>Pyrocephalus rubinus</i>	Vermilion flycatcher
<i>Tachycineta thalassina</i>	Violet-green swallow
<i>Corvus brachyrhynchus</i>	American crow
<i>Auriparus flaviceps</i>	Verdin
<i>Campylorhynchus brunneicapillus</i>	Cactus wren
<i>Toxostoma cinereum</i>	"Gray" thrasher
<i>Regulus satrapa</i>	Golden-crowned kinglet
<i>Phainopepla nitens</i>	Phainopepla
<i>Vireo bellii</i>	Bell's vireo
<i>Vermivora celata</i>	Orange-crowned warbler
<i>Pheucticus ludovicianus</i>	Rose-breasted grosbeak
<i>Passerina cyanea</i>	Indigo bunting
<i>Spizella atrogularis</i>	Black-chinned sparrow
<i>Passerculus sandwichensis beldingi</i>	Savannah sparrow
<i>Junco hyemalis caniceps</i>	Gray-headed junco
<i>Quiscalus mexicanus</i>	Great-tailed grackle
<i>Icterus parisorum</i>	Scott's oriole
<i>Buteo jamaicensis</i>	Red-tailed hawk
<i>Odocoileus hemionus</i>	Mule deer
<i>Urocyon cinereoargenteus</i>	Gray fox
<i>Felis concolor</i>	Mountain lion
<i>Ovis canadensis cremnobates</i>	Peninsular bighorn sheep

Sempra Baja Wind Transmission Line and SDG&E Jacumba Substation

The Jacumba Substation, including the SWPL Loop-In, and Baja Wind Transmission Line routes are located in the Colorado Desert bioregion (CERES, 2003). The substation site and SWPL Loop-In (based on vegetation data from the County of San Diego) consist of Peninsular juniper woodland and scrub and semi-desert chaparral. The U.S. portion of the Baja Wind Transmission routes consists of semi-desert chaparral (based on vegetation data from the County of San Diego). These communities are described in Section D.2.1.2.2 of the January 2008 Draft EIR/EIS. The portion of the Baja Wind Transmission routes in Mexico extends two miles south of the U.S.-Mexico border across what appears to be similar vegetation (based on aerial photograph interpretation); it is expected that similar vegetation communities occur along the routes in Mexico as in the U.S.

Overview of Special Habitat Management Areas. The Jacumba Substation, including the SWPL Loop-In, and Baja Wind Transmission routes do not occur within special habitat management areas.

Designated Critical Habitat. The Jacumba Substation SWPL Loop-In crosses through 0.25 miles of designated critical habitat for the PBS.

Special Status Plant Species. A list of special status plant species with potential to occur at the Jacumba Substation, including SWPL Loop-In, and along the Baja Wind Transmission routes (U.S. portion) is based on CNDDDB records searches. No listed plant species have potential to occur. The following non-listed, sensitive plant species have moderate to high potential to occur. For more specific information about the special status plant species and their sensitivity status, see Table E.1.2-1 in the Draft EIR/EIS (January 2008). Since the portion of the Baja Wind Transmission routes in Mexico extend only two miles south of the U.S.-Mexico border across what appears to be similar habitat (based on aerial photograph interpretation), it is expected that a similar list of special status plant species could occur along the routes in Mexico as in the U.S.

- Rayless ragwort
- Desert beauty
- Jacumba milk-vetch
- Parry's tetracoccus
- Sticky geraea
- Tecate tarplant
- Pygmy lotus
- Slender-leaved ipomopsis
- Southern jewel-flower

Special Status Wildlife Species. The PBS has high potential to occur along the Jacumba Substation SWPL Loop-In and has potential to occur at the Jacumba Substation and along the Baja Wind Transmission routes, both in the United States and in Mexico. The listed QCB has high potential to occur at the Jacumba Substation, including SWPL Loop-In, and along the Baja Wind Transmission routes; these project components in the U.S. are in the USFWS Survey Area 1 for the species. Protocol-level surveys for QCB were conducted at the ECO Substation site and surrounding areas in April 2008 (SDG&E, 2008a). No QCB or their host plants were observed. The larvae, however, can undergo long periods, possibly lasting years, in a dormant stage during especially dry winters or drought years. Therefore, the larval stage of the QCB may be present in areas where the host plants are not in bloom. The barefoot banded gecko has moderate some potential to occur in these project component areas. The highly sensitive golden eagle is not known to nest in the vicinity (Bittner, 2007).

A list of special status wildlife species with potential to occur at the Jacumba Substation, SWPL Loop-In, and along the Baja Wind Transmission routes (in the U.S.) is based on published literature, sources readily available on the Internet, CNDDDB records searches, State and federal species lists, and habitat field surveys for the SWPL Alternatives (see Section E.1.2.1 of the January 2008 Draft EIR/EIS; the I-8 Alternative occurs less than 1,000 feet from the Jacumba Substation and SWPL Loop-In). The fol-

lowing non-listed, sensitive wildlife species have moderate to high potential to occur. For more specific information about the special status wildlife species and their sensitivity status, see Table E.1.2-1 in the Draft EIR/EIS (January 2008). Since the portion of the Baja Wind Transmission route in Mexico extends two miles south of the U.S.-Mexico border across what appears to be similar habitat (based on aerial photograph interpretation), it is expected that a similar list of special status wildlife species could occur along the routes in Mexico as in the U.S.

- Red-diamond rattlesnake
- Coast (San Diego) horned lizard
- Loggerhead shrike
- Jacumba little pocket mouse
- Pallid San Diego pocket mouse
- Pallid bat
- Western mastiff bat
- San Diego black-tailed jackrabbit

SDG&E 69 kV Transmission Line

The 69 kV transmission line is located in the Colorado Desert bioregion (CERES, 2003). The vegetation communities along the line (based on vegetation data from the County of San Diego) consist primarily of chaparral and desert scrub communities (e.g., semi-desert chaparral, red shank chaparral, desert saltbush scrub, and Sonoran mixed woody scrub) with some riparian scrub, oak woodland, and inland scrub communities. Extensive agriculture and developed land are also present. These communities are described in Section D.2.1.2.2 of the January 2008 Draft EIR/EIS.

Overview of Special Habitat Management Areas. The 69 kV transmission line does not occur within a special habitat management area.

Designated Critical Habitat. The 69 kV transmission line crosses through approximately 3.9 miles of designated critical habitat for the QCB.

Special Status Plant Species. A list of special status plant species with potential to occur at along the 69 kV transmission line is based on CNDDDB records searches and habitat field surveys for the SWPL Alternatives (see Section E.1.2.1 of the January 2008 Draft EIR/EIS; the I-8 Alternative occurs approximately 500 feet from the 69 kV Transmission Line). No listed plant species have potential to occur. The following non-listed, sensitive plant species have moderate to high potential to occur. For more specific information about the special status plant species and their sensitivity status, see Table E.1.2-1.

- Rayless ragwort
- Desert beauty
- Jacumba milk-vetch
- Parry's tetracoccus
- Sticky geraea
- Tecate tarplant
- Pygmy lotus
- Slender-leaved ipomopsis
- Southern jewel-flower
- Mountain Springs bush lupine

Special Status Wildlife Species. The 69 kV transmission line is within USFWS Survey Area 1 for the QCB. The QCB is expected to be found along the 69 kV transmission line, especially in its designated critical habitat. The PBS has potential to occur along the eastern portion of the 69 kV transmission line. The highly sensitive golden eagle is not known to nest in the vicinity (Bittner, 2007).

A list of special status wildlife species with potential to occur along the 69 kV transmission line is based on published literature, sources readily available on the Internet, CNDDDB records searches, State and federal species lists, and habitat field surveys for the SWPL Alternatives (see Section E.1.2.1 of the January 2008 Draft EIR/EIS; the I-8 Alternative occurs less than 500 feet from the 69 kV Transmission Line). The following non-listed, sensitive wildlife species have moderate to high potential to occur. For more specific information about the special status wildlife species and their sensitivity status, see Table E.1.2-2.

- Red-diamond rattlesnake
- Coast (San Diego) horned lizard
- Loggerhead shrike
- Cooper's hawk
- Jacumba little pocket mouse
- Pallid San Diego pocket mouse
- Pallid bat
- Western mastiff bat
- San Diego black-tailed jackrabbit
- Southern grasshopper mouse
- Tri-colored blackbird

SDG&E Boulevard Substation Expansion

The Boulevard Substation is located in the Colorado Desert bioregion (CERES, 2003). This site is developed, and it is expected that the expansion would be made onto adjoining developed land.

Overview of Special Habitat Management Areas. The Boulevard Substation does not occur within a special habitat management area.

Designated Critical Habitat. The Boulevard Substation does not occur within designated critical habitat.

Special Status Plant Species. Since the expansion area is expected to include land that is already developed, no special status plant species have potential to occur.

Special Status Wildlife Species. Since the expansion area is expected to include land that is already developed, no special status wildlife species have potential to occur. The highly sensitive golden eagle is not known to nest in the vicinity (Bittner, 2007).

SDG&E White Star Communication Facility

The White Star Communication Facility is located in the Colorado Desert bioregion (CERES, 2003). This site is developed and has multiple other communication towers within close proximity. SDG&E proposes installing a 75-foot-tall steel monopole at White Star and removing two existing wood poles.

Overview of Special Habitat Management Areas. The White Star Communication Facility does not occur within a special habitat management area.

Designated Critical Habitat. The White Star Communication Facility does not occur within designated critical habitat.

Special Status Plant Species. Since the construction area is on land that is already developed, no special status plant species have potential to occur.

Special Status Wildlife Species. Since the expansion area is on land that is already developed, no special status wildlife species have potential to occur. The highly sensitive golden eagle is not known to nest in the vicinity (Bittner, 2007).

2.2.2 Environmental Impacts and Mitigation Measures – Biological Resources

Biology impacts of the RWEPP, the required transmission, substations, and communication components would result in no additional significant and unmitigable Class I impact compared with the RWD Project and Jacumba Substation analyzed in the Draft EIR/EIS. However, the project components associated with the RWEPP would impact a larger number of acres of special status species habitat and a greater amount of vegetation and special status plant species.

Table 2.2-1 shows the level of significance of each biology impact for the Sempra RWEP and associated components. This table compares the significance of each biology impact as identified in the January 2008 Sunrise Powerlink Draft EIR/EIS, and as identified in this recirculated Draft EIR/EIS. Detailed discussions of each impact and the specific locations where each impact is identified are presented in the following sections. The complete impact analysis from the January 2008 Sunrise Powerlink Draft EIR/EIS is presented in Appendix 1.

Table 2.2-1. Comparison of Impacts Identified – Biology

Impact No.	Description	Impact Significance	
		Draft EIR/EIS	Recirculated Draft EIR/EIS
B-1	Construction activities would result in temporary and permanent losses of native vegetation		
	Wind Project in Mexico, Transmission Line to U.S.	Class I, Class III	Class I, Class II, Class III
	Jacumba Substation	Class I, No Impact	Class I, Class II, Class III
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class I, Class II, Class III, No Impact
B-2	Construction activities would result in adverse effects to jurisdictional waters and wetlands through vegetation removal, placement of fill, erosion, sedimentation, and degradation of water quality		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II	Class II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II
B-3	Construction and operation/maintenance activities would result in the introduction of invasive, non-native, or noxious plant species		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II	Class II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II
B-4	Construction activities would create dust that may result in degradation of vegetation		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II	Class II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II
B-5	Construction activities would result in direct or indirect loss of listed or sensitive plants or a direct loss of habitat for listed or sensitive plants		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class I	Class I
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class I, No Impact
B-6	Construction activities, including the use of access roads, would result in disturbance to wildlife and result in wildlife mortality		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II	Class II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II
B-7	Direct or indirect loss of listed or sensitive wildlife or a direct loss of habitat for listed or sensitive wildlife (includes Impacts B-7A through B-7O for individual wildlife resources)		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class I	Class I
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class I, No Impact

Table 2.2-1. Comparison of Impacts Identified – Biology

Impact No.	Description	Impact Significance	
		Draft EIR/EIS	Recirculated Draft EIR/EIS
B-8	Construction activities would result in a potential loss of nesting birds (violation of the Migratory Bird Treaty Act)		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II	Class II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II
B-9	Construction or operational activities would adversely affect linkages or wildlife movement corridors, the movement of fish, and/or native wildlife nursery sites		
	Wind Project in Mexico, Transmission Line to U.S.	Class II, Class III, No Impact	Class II, Class III, No Impact
	Jacumba Substation	Class II, No Impact	Class II, Class III, No Impact
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II, Class III, No Impact
B-10	Presence of transmission lines may result in electrocution of, and/or collisions by, listed or sensitive bird species		
	Wind Project in Mexico, Transmission Line to U.S.	Class I, Class II, No Impact	Class I, Class II, No Impact
	Jacumba Substation	No Impact	No Impact
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class I, Class II, No Impact
B-11	Presence of transmission lines would result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission tower		
	Wind Project in Mexico, Transmission Line to U.S.	Class III	Class III
	Jacumba Substation	No Impact	No Impact
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class III, No Impact
B-12	Maintenance activities would result in disturbance to wildlife and could result in wildlife mortality		
	Wind Project in Mexico, Transmission Line to U.S.	Class I, Class II, Class III	Class I, Class II, Class III
	Jacumba Substation	Class II	Class I, Class II, Class III
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class I, Class II, No Impact
B-13	Operation of the wind component would lead to avian mortality from collision with turbines		
	Wind Project in Mexico	Class I	Class I
B-14	Operation of the wind component would lead to bat mortality from collision with turbines		
	Wind Project in Mexico	Class I	Class I

Significance Criteria. The significance criteria for biological impacts for the Sempra Presidential Permit and related facilities are the same as the significance criteria for the Sunrise Powerlink and based primarily on the CEQA Guidelines Appendix G (shown below). The entire significance criteria can be found in Section D.2.4 in the Sunrise EIR/EIS (January, 2008).

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the Wildlife Agencies.
2. Have a substantial adverse effect on a riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the Wildlife Agencies.
3. Have a substantial adverse effect on federally protected water quality or wetlands as defined by Section 404 of the Clean Water Act, respectively (including, but not limited to riparian, marsh, vernal pool, and desert wash) through direct removal, filling, hydrological interruption, or other means.
4. Interfere substantially with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
5. Conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. [This significance criterion for biological resources is discussed in Section D.16 of the Sunrise EIR/EIS (January, 2008).]
6. Conflict with the provisions of a National Wildlife Refuge, State Park or an adopted Habitat Conservation Plan (HCP), Natural Communities Conservation Plan (NCCP), or other approved local, regional, or State HCP.

Impact B-1: Construction activities would result in temporary and permanent losses of native vegetation (Class I, Class II, Class III, No Impact)

Sempra RWEP, Sempra Baja Wind Transmission Line, SDG&E Jacumba Substation, SDG&E 69 kV Transmission Line (Class I for sensitive vegetation communities, Class I for vegetation management, Class I or Class II for type conversion; Class III for non-sensitive vegetation communities). Construction of the Jacumba Substation and SWPL Loop-In would cause permanent displacement of an estimated 85 acres of sensitive Peninsular juniper woodland and scrub and semi-desert chaparral vegetation. Construction of the 69 kV transmission line would include approximately 7.5 acres of grading for pole locations, work areas, and pull and tension sites along the 13.4 miles of transmission line (4.5 miles of which would be in a new transmission corridor) and grading of approximately 4.66 miles of new access roads that could impact sensitive chaparral and desert scrub communities, riparian scrub, oak woodland, or inland scrub communities. Construction of a Baja Wind Transmission route would include grading for three miles of transmission line and access roads that would impact sensitive semi-desert chaparral and possibly other sensitive desert vegetation communities. Construction of the RWEP Wind Farm could impact up to 7,500 acres of chaparral, pine forest, and possibly some desert communities that may be considered sensitive by Mexican authorities. Impacts to sensitive vegetation would be significant according to Significance Criterion 2.a, which states the project would have a substantial adverse effect on a riparian habitat or other sensitive natural community by temporarily or permanently removing it during construction, grading, clearing, or other activities. This impact is not mitigable to less than significant levels (Class I) because adequate mitigation land may not be available to compensate for the impact. Implementation of Mitigation Measures B-1a(CA), B-1c(CA), B-1d, B-1e, B-1f, B-1g, B-1h, B-1i, and B-1j is required to, at least in part, compensate for impacts to sensitive vegetation. The full text of the mitigation measures appears the first time the mitigation is used. Thereafter, only the mitigation measure title is shown in the text.

Vegetation Management (Loss of Trees). The Jacumba Substation SWPL Loop-In, Baja Wind Transmission, and 69 kV transmission line would likely require some shrub removal or trimming to maintain adequate distances between vegetation and the transmission lines. The 69 kV transmission line may also

require some tree (e.g., coast live oak) removal or trimming. The RWEP Wind Farm would likely not require any additional tree or shrub removal or trimming since the trees and shrubs would have been removed during construction.

The loss of non-native trees and shrubs would usually be an adverse but less than significant impact (Class III) because they are non-native and they typically do not support special status wildlife species. However, removal of a non-native tree or shrub that contains an active bird nest would be a violation of the Migratory Bird Treaty Act and a significant impact, but one that is mitigable to less than significant levels (Class II). Likewise, removal of a native tree or shrub that contains an active bird nest would also be a violation of the Migratory Bird Treaty Act and a significant impact, but one that is mitigable to less than significant levels (Class II). See discussion in Impact B-8 (Construction activities would result in a potential loss of nesting birds [violation of the Migratory Bird Treaty Act]; Section D.2.12 of the January 2008 Draft EIR/EIS) for how construction activities (including tree/shrub removal) would result in a potential loss of nesting birds and violation of the Migratory Bird Treaty Act. The loss of native trees or shrubs would be a significant impact (Class I) for these reasons:

- it can have a substantial adverse effect on candidate, sensitive, or special status species (Significance Criterion 1)
- it can have a substantial adverse effect on riparian habitat or other sensitive natural community (Significance Criterion 2)
- it can have a substantial adverse effect on federally protected water quality or wetlands (Significance Criterion 3)
- it can interfere with wildlife movement or the use of native wildlife nursery sites (Significance Criterion 4)
- it can conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (Significance Criterion 5; see discussion in Section D.16).

Trimming more than 30 percent of a native tree's crown would diminish the tree's value as wildlife habitat and could cause harm to the tree leading to its decline or death. Therefore, native tree trimming would be significant according to Significance Criteria 1, 2, 4, and 5 listed above. The loss and trimming of native trees is considered a significant impact that would not be mitigable to less than significant levels (Class I) because adequate mitigation land required by Mitigation Measure B-1a for restoration and/or acquisition may not be available. However, Mitigation Measure B-1a is recommended to reduce the impacts to the greatest extent possible.

Type Conversion. As discussed in Section D.15, the construction and operation of the Jacumba Substation SWPL Loop-In, Baja Wind Transmission, and 69 kV transmission line could cause wildfires, and could reduce the effectiveness of fire fighting efforts. Fires cause direct loss of vegetation communities, wildlife habitat, and wildlife species. Plants in the desert are not adapted to fire, and they sometimes take years or decades to re-establish in burned areas. Desert areas that are burned are more susceptible to invasion by non-native species, such as grasses or mustards, that can form a continuous cover of fine fuels that dry out in early summer. This cover of fine fuels makes the area more likely to burn again in the near future. Areas dominated by these species also often have a prolonged fire season because the fuels dry quick and earlier in the season. While periodic fires are part of the natural ecosystem, fires burning too frequently can have significant long-term ecological effects such as degradation of habitat (temporal loss of habitat and non-native plant species invasion) and loss of special status species. If the project were to cause a fire or inhibit fighting of fires, and this leads to type conversion of sensitive

vegetation communities, the impact would be significant according to Significance Criterion 1 (substantial adverse effect through habitat modification on any species identified as candidate, sensitive, or special status) and/or Significance Criterion 2 (substantial adverse effect on a riparian habitat or other sensitive natural community). Extensive mitigation for fire risk is presented in Section D.15. However, not all fires can be prevented. Although future fires may not cause type conversion in all instances, the impact must be considered significant because of the severity of potential habitat loss. If type conversion caused by the project occurs in a manageable sized area that could be restored, the impact would be significant but mitigable to less than significant levels (Class II) with implementation of Mitigation Measure B-1a(CA). If type conversion caused by the project occurs over an extensive area, the impact would be significant and not mitigable to less than significant levels (Class I).

SDG&E Boulevard Substation Expansion and SDG&E Communication Facility (No Impact). The Boulevard Substation Expansion and the White Star Communication Tower construction would occur on already developed land; there would be no impacts to sensitive vegetation because no sensitive vegetation exists on any either of these sites. The Boulevard Substation expansion would not require any vegetation management since trees and shrubs would have been removed during construction (No Impact).

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact B-1: Construction activities would result in temporary and permanent losses of native vegetation

- B-1a(CA) Provide restoration/compensation for affected sensitive vegetation communities.**
- B-1c(CA) Conduct biological monitoring.**
- B-1d Perform protocol surveys. [BIO-APM-1]**
- B-1e Train project personnel. [BIO-APM-2]**
- B-1f Construction and survey activities shall be restricted based on final design engineering drawings. [BIO-APM-4]**
- B-1g Build access roads at right angles to streambeds and washes. [BIO-APM-5]**
- B-1h Comply with all applicable environmental laws and regulations. [BIO-APM-6]**
- B-1i Restrict the construction of access and spur roads [BIO-APM-3 and BIO-APM-17]**
- B-1j Protect and restore vegetation. [BIO-APM-20, BIO-APM-23, and BIO-APM-25]**

Impact B-2: Construction activities would result in adverse effects to jurisdictional waters and wetlands through vegetation removal, placement of fill, erosion, sedimentation, and degradation of water quality (Class II)

All Components (Class II). It is expected that direct and/or indirect impacts to jurisdictional waters (i.e., non-wetland areas regulated by the ACOE and RWQCB and/or CDFG) could occur from construction of any project component in the U.S., based on the vegetation communities present and topography. A formal jurisdictional delineation for the project would be conducted once project-specific features are sited and final engineering is complete. Then, impacts to jurisdictional areas can be clearly defined, and the project proponent can apply for permits from the ACOE, RWQCB, and CDFG (delineation and permitting may be required by Mexican authorities for portions of the project in Mexico). Since a formal delineation has not been conducted, the presence and extent of jurisdictional areas is unknown, and the project could have a significant impact on regulated jurisdictional areas according to

Significance Criterion 3.a. which states the project would have a substantial adverse effect on water quality or wetlands as defined by the ACOE and/or CDFG. These impacts would be considered significant but mitigable to less than significant levels (Class II) with implementation of Mitigation Measures B-1c(CA), B-1d, B-1e, B-1f, B-1g, B-2a(CA), B-2b, and B-2c. [The full text of the mitigation measures can be found in Appendix 12 of this EIR/EIS.](#)

Mitigation Measures for Impact B-2: Construction activities would result in adverse effects to jurisdictional waters and wetlands through vegetation removal, placement of fill, erosion, sedimentation, and degradation of water quality

- B-1c(CA) Conduct biological monitoring.**
- B-1d Perform protocol surveys. [BIO-APM-1]**
- B-1e Train project personnel. [BIO-APM-2]**
- B-1f Construction and survey activities shall be restricted based on final design engineering drawings. [BIO-APM-4]**
- B-1g Build access roads at right angles to streambeds and washes. [BIO-APM-5]**
- B-2a(CA) Provide restoration/compensation for affected jurisdictional areas.**
- B-2b Identify environmentally sensitive times and locations for tree trimming. [BIO-APM-16]**
- B-2c Avoid sensitive features. [BIO-APM-18]**

Impact B-3: Construction and operation/maintenance activities would result in the introduction of invasive, non-native, or noxious plant species (Class II)

All Components (Class II). Construction activities could introduce invasive, non-native, or noxious plant (weed) species (e.g., seed brought in on the soles of shoes, or on the tires and undercarriages of vehicles) to the surrounding areas. The inadvertent introduction of non-native plant species is a special concern for sensitive vegetation communities. Non-native plants pose a threat to the natural processes of plant community succession and fire frequency, and can affect the biological diversity and species composition of native plant communities. The survival of some populations of special status species could be adversely affected by the success of an introduced plant species. The introduction of non-native or noxious weeds would be related to the use of vehicles, construction equipment, or earth materials contaminated with non-native plant seed, and use of straw bales or wattles that contain seeds of non-native plant species. Construction of the project would have a substantial adverse effect on riparian or other sensitive vegetation communities if weed species are introduced (Significance Criterion 2.b.), and the impact would be considered significant but mitigable to less than significant levels (Class II) with implementation of Mitigation Measures B-1a(CA), B-1j, B-2a(CA), and B-3a(CA). [The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measures for Impact B-3: Construction and operation/maintenance activities would result in the introduction of invasive, non-native, or noxious plant species

- B-1a(CA) Provide restoration/compensation for affected sensitive vegetation communities.**
- B-1j Protect and restore vegetation. [BIO-APM-20, BIO-APM-23, BIO-APM-25]**
- B-2a(CA) Provide restoration/compensation for affected jurisdictional areas.**
- B-3a(CA) Prepare and implement a Weed Control Plan.**

Impact B-4: Construction activities would create dust that would result in degradation of vegetation (Class II)

All Components (Class II). Construction activities such as grading, excavation, and driving of heavy equipment on unpaved roadways would result in increased levels of blowing dust that may settle on surrounding vegetation. Increased levels of dust on plants can significantly impact plants' photosynthetic capabilities and degrade the overall vegetation community. This would be a significant impact according to Significance Criterion 2.b. (substantial adverse effect on riparian or other sensitive vegetation communities) and Significance Criterion 2.c. (substantial adverse effect on riparian or other sensitive vegetation communities through the spread of fugitive dust) but would be mitigable to less than significant levels (Class II) with implementation of Mitigation Measure B-1i that includes regular watering to control fugitive dust and a 15 mile-per-hour speed limit on dirt access roads to reduce dust. The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measure for Impact B-4: Construction activities would create dust that would result in degradation of vegetation

B-1i Restrict the construction of access and spur roads. [BIO-APM-3, BIO-APM-17]

Impact B-5: Construction activities would result in direct or indirect loss of listed or sensitive plants or a direct loss of habitat for listed or sensitive plants (Class I, No Impact)

Sempra RWEF (Mexico), Sempra Baja Wind Transmission, ~~SDG&E Jacumba Substation, and SDG&E 69 kV Transmission Line (Class I), SDG&E Jacumba Substation (No Impact)~~. Listed or sensitive (special status) plant species impacts could be caused by direct loss of individuals, or direct loss of potential habitat as a result of temporary or permanent grading or vegetation clearing during construction. Ten non-listed, special status plant species have moderate to high potential to occur in the U.S. and along the Baja Wind Transmission routes in Mexico as shown below (also see Table E.1.2-1) and could be impacted by project construction. Twenty-five special status plant species have potential to occur at the RWEF Wind Farm (see the list in the RWEF Wind Farm discussion in Section 2.2.1 above) and could be impacted by project construction.

- Rayless ragwort
- Desert beauty
- Jacumba milk-vetch
- Parry's tetraococcus
- Sticky geraea
- Tecate tarplant
- Pygmy lotus
- Slender-leaved ipomopsis
- Southern jewel-flower
- Mountain Springs bush lupine

A special status plant survey was conducted by SDG&E for the Jacumba Substation site in spring 2008, and the ~~initial biological~~ result indicates no special status plant species occur at the Jacumba Substation site. Because a survey for special status plant species has not been conducted for any of the other project components, ~~and the Jacumba Substation results are still preliminary,~~ it is not possible to assess the impacts to special status plant species, so impacts to them are considered significant and not mitigable to less than significant levels (Class I) according to Significance Criterion 1.a. (any impact to one or more individuals of a species that is federal or State listed as endangered or threatened would be significant) and Significance Criterion 1.b. (any impact that would affect the number or range or regional long-term survival of a sensitive or special status plant species would be significant). Implementation of Mitigation Measures B-1a(CA), B-1c(CA), B-1d, B-1e, B-1f, B-1g, B-1h, B-1i, B-2a(CA), B-2c, B-5a(CA), B-5b, B-5c, and B-5d would minimize the impacts, but not to less than significant levels.

SDG&E Boulevard Substation Expansion and SDG&E Communication Facility (No Impact). The Boulevard Substation Expansion and the White Star Communication Facility construction would occur on already developed land; there would be no impacts to listed or sensitive (special status) vegetation.

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact B-5: Construction activities would result in direct or indirect loss of listed or sensitive plants or a direct loss of habitat for listed or sensitive plants

- B-1a(CA) Provide restoration/compensation for affected sensitive vegetation communities.**
- B-1c(CA) Conduct biological monitoring.**
- B-1d Perform protocol surveys. [BIO-APM-1]**
- B-1e Train project personnel. [BIO-APM-2]**
- B-1f Construction and survey activities shall be restricted based on final design engineering drawings. [BIO-APM-4]**
- B-1g Build access roads at right angles to streambeds and washes. [BIO-APM-5]**
- B-1h Comply with all applicable environmental laws and regulations. [BIO-APM-6]**
- B-1i Restrict the construction of access and spur roads. [BIO-APM-3, BIO-APM-17]**
- B-2a(CA) Provide restoration/compensation for affected jurisdictional areas.**
- B-2c Avoid sensitive features. [BIO-APM-18]**
- B-5a(CA) Conduct rare plant surveys, and implement appropriate avoidance/minimization/compensation strategies.**
- B-5b Delineate sensitive plant populations. [BIO-APM-8]**
- B-5c No collection of plants or wildlife. [BIO-APM-13]**
- B-5d Salvage sensitive species for replanting or transplanting. [BIO-APM-22]**

Impact B-6: Construction activities, including the use of access roads, would result in disturbance to wildlife and result in wildlife mortality (Class III)

All Components (Class III). Direct loss of small mammals, reptiles, and other less mobile species would occur during construction of the project. This section discusses impacts to wildlife in general, particularly non-special status species. Impacts to special status species are described in Impact B-7. Deaths related to construction would be incurred primarily by burrow-dwelling animals; eggs and nestlings of bird species with small, well-hidden nests (impacts to nesting birds is discussed in Impact B-8); and species with limited mobility (lizards, snakes, ground squirrels). More mobile species like birds and larger mammals are expected to disperse into adjacent habitat areas during land clearing and grading. Construction activities and human presence can also alter or disrupt the breeding and foraging behaviors of wildlife. Impact B-6 (Construction activities, including the use of access roads, would result in disturbance to wildlife and result in wildlife mortality) is discussed in greater detail in Section D.2.10 of the January 2008 Draft EIR/EIS.

Except where wildlife habitats are known to support sensitive, rare, threatened, or endangered species or nesting birds (addressed in Impacts B-7, B-7B, B-7J, B-7O, and B-8), all of the impacts to general, non-special status wildlife from construction of the project would be adverse but less than significant (Class III). No mitigation is recommended.

Impact B-7: Construction activities would result in direct or indirect loss of listed or sensitive wildlife or a direct loss of habitat for listed or sensitive wildlife (Class I, No Impact)

Sempra RWEF (Mexico), Sempra Baja Wind Transmission, SDG&E Jacumba Substation, and SDG&E 69 kV Transmission Line (Class I). The project has the potential to impact the following listed wildlife species: PBS (Impact B-7B), QCB (Impact B-7J), and barefoot banded gecko (Impact B-7O; see individual impact discussions). The project also has the potential to impact the following non-listed, sensitive wildlife species and their habitats in the U.S. and along the Baja Wind Transmission routes in Mexico.

- Red-diamond rattlesnake
- Coast (San Diego) horned lizard
- Loggerhead shrike
- Cooper's hawk
- Jacumba little pocket mouse
- Pallid San Diego pocket mouse
- Pallid bat
- Western mastiff bat
- San Diego black-tailed jackrabbit
- Southern grasshopper mouse
- Tri-colored blackbird

Up to 51 wildlife species have potential to occur at the RWEF Wind Farm (see the list in the RWEF Wind Farm discussion in Section 2.2.1 above) and could be impacted by project construction. These species may or may not be considered special status in Mexico.

Impacts to non-listed, sensitive species would be significant as the project would have a substantial adverse effect on listed and sensitive wildlife species and their habitats according to Significance Criterion 1 (substantial adverse effect, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the Wildlife Agencies).

Most of the non-listed, sensitive species' habitats include sensitive vegetation communities. The mitigation for the loss of the sensitive vegetation communities (Mitigation Measure B-1a[CA]) would normally compensate for the potential loss of these sensitive species and their habitats. However, since adequate land required by Mitigation Measure B-1a(CA) may not be available, the impacts to non-listed, sensitive wildlife species would be considered significant and not mitigable to less than significant levels (Class I). Implementation of Mitigation Measures B-1a(CA), B-1c(CA), B-1e, B-1f, B-1i, B-2a(CA), B-2b, B-6a, B-6b, B-6c, B-6d, and B-7a(CA) is recommended to compensate, at least in part, for impacts to non-listed, sensitive wildlife species and their habitats.

Impacts to the listed species and their habitats and the significance of these impacts are described in Impacts B-7B, B-7J, and B-7O.

SDG&E Boulevard Substation Expansion and SDG&E Communication Facility (No Impact.) The Boulevard Substation Expansion and the White Star Communication Facility construction would occur on already developed land; there would be no impacts to listed or sensitive wildlife.

[The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measures for Impact B-7: Construction activities would result in direct or indirect loss of listed or sensitive wildlife or a direct loss of habitat for listed or sensitive wildlife

B-1a(CA) Provide restoration/compensation for affected sensitive vegetation communities.

B-1c(CA) Conduct biological monitoring.

B-1e Train project personnel.

- B-1f** Construction and survey activities shall be restricted based on final design engineering drawings. [BIO-APM-4]
- B-1i** Restrict the construction of access and spur roads. [BIO-APM-3, BIO-APM-17]
- B-2a(CA)** Provide restoration/compensation for affected jurisdictional areas.
- B-2b** Identify environmentally sensitive times and locations for tree trimming. [BIO-APM-16]
- B-6a** Littering is not allowed. [BIO-APM-7]
- B-6b** Survey areas for brush clearing. [BIO-APM-9]
- B-6c** Protect mammals and reptiles in excavated areas. [BIO-APM-24 and BIO-APM-26]
- B-6d** Reduce construction night lighting on sensitive habitats. [BIO-APM-29]
- B-7a(CA)** Cover all steep-walled trenches or excavations used during construction to prevent the entrapment of wildlife (e.g., reptiles and small mammals).

Impact B-7B: Direct or indirect loss of peninsular bighorn sheep or direct loss of habitat (Class I, No Impact)

Sempra RWEF (Mexico), Sempra Baja Wind Transmission, SDG&E Jacumba Substation, and SDG&E 69 kV Transmission Line (Class I). Based on the species' current distribution and/or potential habitat, the PBS has high potential to occur along the Jacumba Substation SWPL Loop-In (the loop-in traverses 0.25 miles of PBS designated critical habitat) and has potential to occur at the Jacumba Substation site, along the Baja Wind Transmission routes, along the eastern portion of the 69 kV transmission line, and at the RWEF Wind Farm site where some desert communities may be present in lower elevations closer to the U.S.-Mexico border. All critical habitat for the PBS is considered occupied by the species.

There are more PBS in Mexico than in the U.S (Bighorn Institute, 2007); the most recent surveys estimate the Baja California population at 2,000 to 2,500 (Bighorn Institute, 2007). The Mexican government has established a new conservation program for managing PBS in Mexico (Bighorn Institute, 2007). See Impact B-7B in Section D.2.11 of the January 2008 Draft EIR/EIS for additional species information.

As analyzed in Impact B-1, the impacts to the vegetation communities that are part of PBS habitat itself are significant and not mitigable to less than significant levels (Class I) because suitable PBS replacement habitat may not be available. Even if enough suitable land is available to mitigate habitat impacts to a less than significant level, human and construction activity in PBS habitat could cause PBS to avoid affected areas and could interfere with the use of resources, traditional movement routes, and/or could cause physiological stress or increased predation. All of the potential effects listed above could adversely affect the species. These impacts are significant according to the following Significance Criteria: 1.a.) substantial adverse effect through any impact to one or more individuals of a federal or State listed species; 1.f.) substantial adverse effect by any impact that directly or indirectly causes the mortality of special status wildlife species; 4.a.) substantial adverse effect by preventing access to foraging habitat, breeding habitat, water sources, etc.; 4.b.) substantial adverse effect by interfering with connectivity between blocks of habitat or block or interfere with a wildlife corridor; and 4.c.) the substantial adverse effect by fragmenting a species' population. Based on the special status of this species and evidence that shows human activities significantly and adversely affect it, these impacts would be significant and not mitigable to less than significant levels (Class I). Implementation of Mitigation Measures B-1a(CA), B-1c(CA), B-2a(CA), and B-7c(CA) is recommended to, at least in part, compensate for impacts to PBS.

SDG&E Boulevard Substation Expansion and SDG&E Communication Facility (No Impact.) The Boulevard Substation Expansion and the White Star Communication Tower construction would occur on already developed land; there would be no impacts to PBS.

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact B-7B: Direct or indirect loss of peninsular bighorn sheep or direct loss of habitat

- B-1a(CA) Provide restoration/compensation for affected sensitive vegetation communities.**
- B-1c(CA) Conduct biological monitoring.**
- B-2a(CA) Provide restoration/compensation for affected jurisdictional areas.**
- B-7c(CA) Minimize impacts to peninsular bighorn sheep and provide compensation for loss of critical habitat.**

*Impact B-7J: Direct or indirect loss of ~~quino~~ **Quino** checkerspot butterfly or direct loss of habitat (Class I, Boulevard Substation Expansion: No Impact)*

Sempra RWEPP (Mexico), Sempra Baja Wind Transmission, SDG&E Jacumba Substation, and SDG&E 69 kV Transmission Line (Class I). All of the project areas in the U.S. occur in USFWS Survey Area 1 for the QCB (the Boulevard Substation Expansion area is developed), and approximately 3.9 miles of the 69 kV transmission line crosses through its designated critical habitat. Since no protocol surveys for QCB were completed for these project components it is not possible to assess the impacts to the QCB, so the impacts are considered significant and not mitigable to less than significant levels (Class I) according to Significance Criterion 1.a. (impact one or more individuals of a species that is federal or State listed as endangered or threatened) since adequate land required by Mitigation Measure B-7i(CA) may not be available. However, Mitigation Measures B-1a(CA), B-1c(CA), B-2a(CA), and B-7i(CA) are recommended to, at least in part, minimize impacts to the QCB. See Impact B-7J in Section D.2.11 for species information.

SDG&E Jacumba Substation (No Impact). A USFWS protocol survey for the QCB was conducted by SDG&E during the 2008 flight season for the Jacumba Substation. The preliminary SDG&E biological survey results indicate that no QCB or their host plants were observed. Because 2008 was a good year for the QCB, the survey would have found QCB or their host plants had they been present at the Jacumba Substation site. These results indicate that there are no QCB in the region of the Jacumba Substation and as such, there would be no impact to QCB by the construction of the Jacumba Substation.

SDG&E Boulevard Substation Expansion and SDG&E Communication Facility (No Impact). The Boulevard Substation Expansion and the White Star Communication Facility construction would occur on already developed land; there would be no impacts to QCB.

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

*Mitigation Measures for Impact B-7J: Direct or indirect loss of ~~quino~~ **Quino** checkerspot butterfly or direct loss of habitat*

- B-1a(CA) Provide restoration/compensation for affected sensitive vegetation communities.**
- B-1c(CA) Conduct biological monitoring.**
- B-2a(CA) Provide restoration/compensation for affected jurisdictional areas.**
- B-7i(CA) Conduct ~~quino~~ **Quino** checkerspot butterfly surveys, and implement appropriate avoidance/minimization/compensation strategies.**

Impact B-70: Direct or indirect loss of barefoot banded gecko or direct loss of habitat (Class I, No Impact)

Sempra RWEPP (Mexico), Sempra Baja Wind Transmission, ~~SDG&E Jacumba Substation, and SDG&E 69 kV Transmission Line (Class I), and SDG&E Jacumba Substation (No Impact)~~. The barefoot banded gecko occupies arid, rocky areas on flatlands and in canyons and thornscrub, especially where there are large boulders and rock outcrops and the vegetation is ~~sparse~~ sparse from sea level to 2,300 feet (CaliforniaHerps.com, 2007). This species could occur at any of the project components where potential habitat is present. No surveys were conducted for this species. If surveys were conducted, and the species was not found, the survey result would have to be considered false negative because of the species' highly elusive nature. The barefoot banded gecko is, therefore, assumed to be present in the project area, except at the Jacumba Substation where the elevation is too high. Any impact to the barefoot banded gecko or its habitat would be significant according to Significance Criterion 1 (substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species) and not mitigable to less than significant levels (Class I) because suitable mitigation land for the gecko may not be available. Implementation of Mitigation Measures B-1a(CA), B-1c(CA), and B-2a(CA) is recommended to, at least in part, compensate for impacts to this species.

SDG&E Boulevard Substation Expansion and SDG&E Communication Facility (No Impact.) The Boulevard Substation Expansion and the White Star Communication Facility construction would occur on already developed land; no barefoot banded gecko habitat is present in these areas and there would be no impacts.

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact B-70: Direct or indirect loss of barefoot banded gecko or direct loss of habitat

B-1a(CA) Provide restoration/compensation for affected sensitive vegetation communities.

B-1c(CA) Conduct biological monitoring.

B-2a(CA) Provide restoration/compensation for affected jurisdictional areas.

Impact B-8: Construction activities would result in a potential loss of nesting birds (violation of the Migratory Bird Treaty Act) (Class II)

All Components (Class II). Construction of the project would violate the Migratory Bird Treaty act if it resulted in the killing of migratory birds or caused the destruction or abandonment of migratory bird nests and/or eggs (Significance Criterion 1.g). This could occur through the removal of vegetation containing bird nests and/or through vehicle and foot traffic or excessive noise associated with construction that cause nest destruction or abandonment of a nest. Prohibitions under the Migratory Bird Treaty Act also apply to birds in Mexico under international conventions between the U.S. and Mexico. Violation of the Migratory Bird Treaty Act is a significant impact that is mitigable to less than significant levels (Class II) with implementation of Mitigation Measures B-1e, B-1f, B-1g, B-1h, B-1i, B-2b, B-2c, B-6b, B-8a(CA), and B-8b.

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact B-8: Construction activities would result in a potential loss of nesting birds (violation of the Migratory Bird Treaty Act)

B-1e Train project personnel. [BIO-APM-2]

- B-1f** Construction and survey activities shall be restricted based on final design engineering drawings. [BIO-APM-4]
- B-1g** Build access roads at right angles to streambeds and washes. [BIO-APM-5]
- B-1h** Comply with all applicable environmental laws and regulations. [BIO-APM-6]
- B-1i** Restrict the construction of access and spur roads. [BIO-APM-3, BIO-APM-17]
- B-2b** Identify environmentally sensitive times and locations for tree trimming. [BIO-APM-16]
- B-2c** Avoid sensitive features. [BIO-APM-18]
- B-6b** Survey areas for brush clearing. [BIO-APM-9]
- B-8a(CA)** Conduct pre-construction surveys and monitoring for breeding birds.
- B-8b** Removal of raptor nests. [BIO-APM-27]

Impact B-9: Adverse effects to linkages or wildlife movement corridors, the movement of fish, and/or native wildlife nursery sites (Class II, Class III, No Impact)

Sempra RWEF (Mexico), Sempra Baja Wind Transmission, SDG&E Jacumba Substation, and SDG&E 69 kV Transmission Line (Class II for bat colonies; Class III linkages or wildlife movement corridors; No Impact fish movement). Bat nursery colonies would be significantly impacted by the project if humans approach an active nursery colony, if entrances to nursery colony sites become blocked, if construction involves blasting or drilling that causes substantial vibration of the earth/rock surrounding an active nursery colony, or if a structure such as a bridge is disturbed by construction. These colonies could be located in rock crevices, caves, or culverts; inside/under bridges; in other man-made structures; and in trees (typically snags or large trees with cavities). Impacts to bat nursery colonies would be significant according to Significance Criterion 4, which states that the project would impede the use of native wildlife nursery sites. This impact is significant but mitigable to less than significant levels (Class II) with implementation of Mitigation Measures B-1g, B-1i, B-2c, B-6d, and B-9a. Impact B-14 addresses bat mortality from collision with turbines.

Due to the intermittent locations of construction activity and its temporary nature, wildlife would not be physically prevented from moving around project equipment in the transmission corridors. During project operation, the widely spaced towers would not physically obstruct wildlife movement; wildlife could move under and around the towers. The RWEF Wind Farm site is an estimated 7,500-acres in size, and for this analysis, is assumed to be unfenced. Although it is an extensive area, without fencing, wildlife would generally be able to move through it, and the wind farm would not be expected to reduce wildlife populations within or adjacent to the site below self-sustaining levels, so impacts to wildlife movement from the project would be considered adverse but less than significant (Class III). No mitigation is recommended.

Surface water resources that likely occur in the project area could include desert washes and other streams, the majority of which are dry at most times and unlikely to support fish populations. Therefore, the project is not expected to affect the movement of fish (No Impact).

SDG&E Boulevard Substation Expansion and SDG&E Communication Facility (No Impact.) The Boulevard Substation Expansion and the White Star Communication Facility construction would occur on already developed land; no impacts to linkages and wildlife movement corridors are expected.

[The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measures for Impact B-9: Adverse effects to linkages or wildlife movement corridors, the movement of fish, and/or native wildlife nursery sites

- B-1g** Build access roads at right angles to streambeds and washes. [BIO-APM-5]
- B-1i** Restrict the construction of access and spur roads. [BIO-APM-3, BIO-APM-17]
- B-2c** Avoid sensitive features. [BIO-APM-18]
- B-6d** Reduce construction night lighting on sensitive habitats. [BIO-APM-29]
- B-9a** Survey for bat nursery colonies.

Impact B-10: Presence of transmission lines may result in electrocution of, and/or collisions by, listed or sensitive bird species (No impact for electrocution [all components]; Class I for collision for listed species [all components except substations]; Class II for collision for non-sensitive species or daytime migration [all components except substations])

Electrocution

All Components (No Impact). The risk of electrocution for the transmission lines (i.e., SWPL Loop-In, Baja Wind Transmission [either double-circuit 230 kV or single-circuit 500 kV], and 69 kV transmission line is the same for this option as for the SRPL Proposed Project in Section D.2.14: No Impact.

The California condor is present in Mexico (and could cross into the U.S.) and has a wingspan of up to nine feet and height (head to foot) of 46 to 55 inches (Palmer, 1988). The wingspan and height of this bird is not long enough to simultaneously contact two energized phase conductors along the 230 kV or 500 kV transmission lines. Furthermore, the majority of raptor electrocutions are caused by lines that are energized at voltage levels less than 69 kV (APLIC, 2006; Manville II², 2005). If the birds were to roost communally, however, there is some potential, although very low, that multiple birds would bridge the gap between two energized conductors and be electrocuted (see Section D.2.14.) Therefore, Mitigation Measure B-10b is recommended to prevent electrocution risk.

Collision

Sempra RWEPP (Mexico). Avian collisions with wind turbines are discussed in Impact B-13.

Sempra Baja Wind Transmission Line, Jacumba Substation SWPL Loop-In, SDG&E 69 kV Transmission Line (Class I for collision for listed species; Class II for collision for non-sensitive species or daytime migration). The primary issue with respect to birds and transmission projects is birds colliding with the transmission towers or lines in migration, especially in spring migration when strong winds and storms are more likely to force the birds to fly at relatively low altitudes. Mortality as a result of collision with the project features would be greatest where the movements of migrating birds are the most concentrated. Bird migration happens all along the east side of San Diego County's mountains but is most concentrated in the canyons and valleys that lead from southeast to northwest, such as Grapevine Canyon and San Felipe Valley (Unitt, 2007).

Even so, since most birds migrate at night, there is no way to know how many birds and what species of birds could actually be impacted by collision with this project's transmission lines. There is no way to know because much of the migration occurs at night when it cannot be seen, and birds that collide with transmission line features and fall to the ground are often taken away by predators/scavengers before morning. Therefore, as with the SRPL Proposed Project, it is assumed that some migrating species could be federal or State listed or of other special status, and their mortality would be a significant impact that is not mitigable to less than significant levels (Class I) according to Significance Criterion 1.a. (impact one or more individuals of a species that is federal or State listed), Significance Criterion

1.f. (directly or indirectly cause the mortality of candidate, sensitive, or special status wildlife), and Significance Criterion 1.g. (killing of migratory birds or destruction or abandonment of migratory bird nests and/or eggs). Also, like the SRPL Proposed Project, for non-sensitive species or species that migrate during the day, collision would be significant according to Significance Criteria 1.f. and 1.g. but would be mitigable to less than significant levels (Class II) with implementation of Mitigation Measure B-10a(CA).

SDG&E Jacumba Substation, Boulevard Substation Expansion, and SDG&E Communication Facility. Impacts to raptors and other avian species from collisions with substation facilities have not been historical issues at SDG&E substations throughout San Diego County (Pandion Systems, Inc. 2006). Therefore, no impacts to avian species from collision are expected for the Jacumba or Boulevard substations (No Impact). The White Star Communication Facility would include demolishing two existing wooden poles and replacing them with one 75-foot steel monopole. Impacts of the tower are expected to be similar as to the substations (No Impact).

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact B-10: Presence of transmission lines may result in electrocution of, and/or collisions by, listed or sensitive bird species

B-10a(CA) Utilize collision-reducing techniques in installation of transmission lines.

B-10b Structures shall be constructed to conform to “Suggested Practices for Raptor Protection on Power Lines.” [BIO-APM-21]

Impact B-11: Presence of transmission lines may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers (Class III)

Sempra Baja Wind Transmission Line, Jacumba Substation SWPL Loop-In, SDG&E 69 kV Transmission Line (Class III). The common raven has not been documented to prey on any listed or sensitive wildlife in the project area (Liebezeit et al., 2002), although the predation may still occur on a limited basis. Although new towers would be introduced with this project, the increase in predation of listed and sensitive wildlife species by ravens that nest on transmission towers, if it were to occur, would be adverse but less than significant (Class III). No mitigation is recommended.

SDG&E Jacumba Substation, Boulevard Substation Expansion, and SDG&E Communication Facility (No Impact). No new transmission towers would be introduced by these components, as such increased predation is not expected to occur (No Impact). The White Star Communication Facility would replace two existing wooden towers.

Impact B-12: Maintenance activities would result in disturbance to wildlife and could result in wildlife mortality (Class I for peninsular bighorn sheep; Class II for ~~quino~~ Quino checkerspot butterfly and other special status wildlife, nesting birds, non-sensitive wildlife and barefoot banded gecko)

Sempra RWEF (Mexico), Sempra Baja Wind Transmission, SDG&E Jacumba Substation, and SDG&E 69 kV Transmission Line (Class I for peninsular bighorn sheep; Class II for ~~quino~~ Quino checkerspot butterfly and other special status wildlife, nesting birds, non-sensitive wildlife and barefoot banded gecko) Maintenance of substations is anticipated to include minor inspection of the sites once per week (1-2 personnel) and major inspections once per year (for one week, with 20 personnel) as described for substation maintenance for the SRPL Proposed Project. Maintenance activities, particularly driving on dirt access roads to reach the substations, would result in disturbance to wildlife or wildlife mortality, and these impacts are significant according to Significance Criterion 1.f. (impacts that directly/indi-

rectly cause the mortality of candidate, sensitive, or special status species) but mitigable to less than significant levels (Class II) with implementation of Mitigation Measures B-6a and B-12d.

These types of impacts could occur from maintenance of the transmission lines and wind farm: impacts to nesting birds if vegetation is cleared during the breeding season; mortality of special status species from grading, vegetation clearing, or use of access roads; and/or adverse effects to PBS from maintenance activities that cause sheep to avoid affected areas. These impacts would cause disturbance to wildlife and potential wildlife mortality and would be significant according to Significance Criteria 1.a., 1.d., 1.f., 1.g., and 2.b. that include any impacts to one or more listed species (1.a.); disturbance of critical habitat (1.d.); impacts that directly/indirectly cause the mortality of candidate, sensitive, or special status species (1.f.); violation of the Migratory Bird Treaty Act (1.g.); and substantial adverse effect on riparian or other sensitive vegetation communities if weed species are introduced (2.b.; this impact would degrade wildlife habitat).

Impacts to non-sensitive wildlife from maintenance of the transmission lines and wind farm would be significant but mitigable to less than significant levels (Class II) with implementation of Mitigation Measures B-1f, B-1h, B-1i, B-2b, B-3a(CA), B-5c, B-6a, B-6b, B-7c(CA), and B-12a(CA).

Maintenance activities would impact nesting birds (violation of Migratory Bird Treaty Act) if vegetation is cleared during the general avian breeding season (January 15 through August 15) or the raptor breeding season (January 1 through September 15). This impact would be significant but mitigable to less than significant levels (Class II) with implementation of Mitigation Measure B-12a(CA).

Maintenance activities associated with the transmission lines and wind farm would cause disturbance to, and possible mortality of, QCB. These impacts would be significant but mitigable to less than significant levels (Class II) with implementation of Mitigation Measure B-12c.

Impacts to barefoot banded gecko from maintenance activities associated with the transmission lines and wind farm would be adverse but less than significant (Class III) because the species are not known to be impacted by noise, and they are unlikely to occur on a maintained access road, tower pad, or other work area. No mitigation is recommended.

Impacts to PBS (see Section D.2.11, Impact B-7B) from maintenance activities associated with the transmission lines and wind farm could cause PBS to avoid affected areas and could interfere with the use of resources such as escape terrain; water; mineral licks; rutting, lambing, or feeding areas; the use of traditional movement routes, and/or could cause physiological stress or increased predation. All of these potential effects could adversely affect the species. These impacts are significant and not mitigable to less than significant levels (Class I), although Mitigation Measure B-7c(CA) is recommended to minimize the impacts.

Boulevard Substation Expansion, and SDG&E Communication Facility (No Impact). Maintenance for the Boulevard Substation and the White Star Communication Facility would occur on already developed land and would use existing roadways to reach the facilities; as such, there would be no disturbance to wildlife (No Impact).

[The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measures for Impact B-12: Maintenance activities would result in disturbance to wildlife and could result in wildlife mortality

- B-1f** Construction and survey activities shall be restricted based on final design engineering drawings. [BIO-APM-4]
- B-1h** Comply with all applicable environmental laws and regulations. [BIO-APM-6]
- B-1i** Restrict the construction of access and spur roads. [BIO-APM-3, BIO-APM-17]
- B-2b** Identify environmentally sensitive times and locations for tree trimming. [BIO-APM-16]
- B-3a(CA)** Prepare and implement a Weed Control Plan.
- B-5c** No collection of plants or wildlife. [BIO-APM-13]
- B-6a** Littering is not allowed. [BIO-APM-7]
- B-6b** Survey areas for brush clearing. [BIO-APM-9]
- B-7c(CA)** Minimize impacts to peninsular bighorn sheep and provide compensation for loss of critical habitat.
- B-12a(CA)** Conduct maintenance activities outside the general avian breeding season.
- B-12c** Maintain access roads and clear vegetation in ~~quino~~ **Quino** checkerspot butterfly habitat.
- B-12d** Protect wildlife.

Impact B-13: Operation of the wind component would lead to avian mortality from collision with turbines (Class I)

Sempra RWEPP (Mexico). Operation of the RWEPP Wind Farm is expected to result in mortality of birds due to collision with wind turbines. Recent studies have shown that taller towers are likely to reduce raptor mortality due to an increase in ground to rotor clearance, especially for red-tailed hawks, golden eagles and American kestrels that utilize spaces closer to the ground for hunting prey. For example, golden eagles have often been observed hunting within three meters of the ground. Also, raptor use has been shown in general to be higher on the prevailing upwind side of ridges, and turbines sited away from the rim edge may contribute to lower raptor fatality rates. Ground disturbance around wind turbines (roads and work pads) increases the vertical/horizontal edge near turbines, which also may increase prey densities and raptor use. Also, ground disturbance that creates rock piles creates habitat for small mammals and reptiles which could then attract raptors to the turbine sites. Small mammals and reptiles may also be likely to burrow near the turbine bases where soil has been disturbed. Rodent control programs have been used in the past at wind project sites; however, recent studies suggest moderate levels (intermittent) of rodent control may increase raptor fatalities, and secondary impacts to terrestrial wildlife from rodent control are a concern. Associated facilities at wind projects include permanent meteorological towers. Studies have shown that guyed meteorological towers may kill more passerines per structure than wind turbines (Contra Costa, 2007).

Avian mortality would be significant according to Significance Criteria 1.f. (impacts that directly/indirectly cause the mortality of candidate, sensitive, or special status species) or 1.g. (violation of the Migratory Bird Treaty Act) and would be significant and not mitigable to less than significant levels (Class I). Implementation of Mitigation Measure B-13a(LR) is recommended to, at least in part, compensate for impacts to birds from collision with turbines.

Mitigation Measure for Impact B-13: Operation of the RWEF Wind Farm would lead to avian mortality from collision with turbines

B-13a(LR) Implement measures to reduce avian impacts from turbine activities. This mitigation measure includes the following:

Impact B-14: Operation of the wind component would lead to bat mortality from collision with turbines (Class I)

Sempra RWEF (Mexico). Operation of the RWEF Wind Farm is expected to result in some bat mortality from collision with wind turbines. Studies show that bat mortality from collision with wind turbines is highest during the late summer and fall migration season. Based on other studies in the western U.S., some mortality of mostly migratory bats is anticipated. Projected mortality levels are unknown and could be higher or lower based on such factors as regional migratory patterns, patterns of local movements through the project area, and the response of bats to turbines — both individually and collectively (Contra Costa, 2007).

- Bat mortality would be significant according to Significance Criteria 1.f. (impacts that directly/indirectly cause the mortality of candidate, sensitive, or special status species) and would not be mitigable to less than significant levels (Class I). Implementation of Mitigation Measure B-14a is recommended to, at least in part, compensate for impacts to bats from collision with turbines.

The full text of Mitigation Measure B-14a is included in Appendix 12 of this EIR/EIS.

Mitigation Measure for Impact B-14: Operation of the RWEF Wind Farm would lead to bat mortality from collision with turbines

B-14a Implement a scientifically defensible monitoring program to estimate bat fatality rates from new turbines.

2.3 Visual Resources

2.3.1 Environmental Setting – Visual Resources

Sempra RWEP (Mexico)

The RWEP wind farm would be located north of the town of La Rumorosa, population 1,615 (Mexico Census, 2005), and just south of the U.S.-Mexico border. This region is within the Sierra de Juárez Mountains, and the landscape along this area is rugged, offering partial screening of the wind farm from the town of La Rumorosa. Highway Mexico 2 (toll road) and the original Highway Mexico 2, running between Tijuana and Mexicali, would run less than 1 mile south of the RWEP wind farm. In addition there are several dirt roads leading into La Rumorosa within the RWEP wind farm. Views of the mountains from Highway Mexico 2 and from all local roads are unobstructed except by the natural landscape. The mountainous landscape has minimal evidence of built modifications other than the town of La Rumorosa and the existing 230 kV transmission line. Landform colors are predominantly light tan to dark tan for soils, and darker brown for rocks and crags.

Views of the wind farm would be available from several locations in the U.S. including the community of Jacumba, Interstate 8, Old Highway 80, Table Mountain ACEC, Anza-Borrego Desert State Park, Jacumba Wilderness, and BLM-administered lands in the Yuha Desert to the east. Because of the broad visibility of the wind development area, three Key Viewpoints (KVPs 83, 84, and 85) were selected to capture the various visual settings that would be affected. The locations of the three KVPs are shown on Figure 2.3-1. A discussion of the existing visual settings for each KVP is presented in the following paragraphs.

Key Viewpoint 83 – Hill Street in Jacumba (VS-VC)

Key Viewpoint 83 was established on Hill Street, just south of Old Highway 80 in the community of Jacumba, approximately four miles west of the wind development site (see Figure 2.3-6). Viewing to the east across the flat mesa toward the north end of the Sierra de Juárez Mountains, this location was selected to generally characterize the existing landscape visible to residents of Jacumba and local roads within the community.

Visual Quality. Moderate. The view from KVP 83 encompasses a foreground to middleground, relatively non-descript, flat, grass- and shrub-covered desert mesa and mountain landscape with noticeable utility towers (to the left of the frame of view presented in Figure 2.3-6). The dominant, rugged and angular landform of the Sierra de Juárez Mountains provides a backdrop that adds visual variety and interest. Views are open and unobstructed with available panoramic sightlines. Overall, the general lack of visual variety partially offsets the panoramic vista views to create a landscape with moderate visual appeal.

Viewer Concern. High. Residents in Jacumba in general and along Hill Street in particular are provided panoramic views across a broad, flat desert mesa to distant mountain ranges. Although some residents and travelers on the local roads may anticipate the energy infrastructure (SWPL transmission line) as it parallels and then diverges from Old Highway 80 (out of view of the photograph presented in Figure 2.3-6), any addition of industrial character to the otherwise predominantly natural appearing landscape or blockage of views to more valued landscape features (Sierra de Juárez Mountains and sky) would be seen as an adverse visual change in the landscape

Viewer Exposure. Moderate. The wind farm would be highly visible in the middleground to background of views from residences in Jacumba. The number of viewers would be low but the duration of view would be extended. Combining these four equally weighted factors gives an overall moderate viewer exposure.

Overall Visual Sensitivity. Moderate-to-high. For in residents in Jacumba with direct sightlines to the Sierra de Juárez Mountains, combining the equally weighted moderate visual quality, high viewer concern, and moderate-to-high viewer exposure results in an overall moderate-to-high visual sensitivity of the visual setting and viewing characteristics.

Key Viewpoint 84 – Table Mountain (VRM)

Key Viewpoint 84 was established on the southeast shoulder of Table Mountain (see Figure 2.3-7A). Viewing to the south-southeast toward the north end of the Sierra de Juárez Mountains, this location was selected to generally characterize the existing landscape visible from Table Mountain ACEC and the southern end of Anza-Borrego Desert State Park. This view encompasses the northern end of the Sierra de Juárez Mountains in Mexico and the flat desert mesa west of the mountains. Also visible (though difficult to discern) are the complex structural forms of the existing SWPL transmission line structures and the linear, horizontal form of Old Highway 80. The rugged mountain landforms and jagged ridges enhance visual variety and interest. However, the steel-lattice SWPL transmission line with its industrial character, the noticeability of which varies under different lighting conditions, detracts from the otherwise natural appearing landscape. Landform colors are predominantly light tan for soils with tan to reddish-brown hues for rocks and bluish hues at distance. Landform textures appear smooth to granular while the vegetation is irregular to patchy with clumps. Vegetation exhibits a matte texture and vegetation colors include tans to pale yellow for grasses with muted to light and dark greens and tans for the shrubs. The boulder slopes and jagged ridges of the Sierra de Juárez Mountains and the availability the panoramic vista view enhance visual variety and interest. The BLM scenic quality classification and viewer sensitivity are not available but the VRM Class Rating is II as identified in the current Eastern San Diego County Management Plan. The VRM Class II Management Objective is as follows:

VRM Class II. 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.

Key Viewpoint 85 – Elliot Mine Area (VRM)

Key Viewpoint 85 was established along the access road to the Elliot Mine area, approximately three miles southeast of Old Highway 80 (see Figure 2.3-8). Viewing to the south toward the north end of the Sierra de Juárez Mountains, this location was selected to generally characterize the existing landscape visible from this popular hiking and rock climbing area. This view is from a small portion of a larger landscape unit that includes the Devils Canyon and In-Ko-Pah Gorge areas along Interstate 8, west of Jacumba Wilderness. The rugged desert landscape is predominantly natural appearing with minimal built features. Jagged to angular ridgelines and rocky outcrops create areas of visual interest as do distant views across the Yuha Desert to the east. Landform colors are predominantly light tan for soils with tan to reddish-brown hues for rocks and bluish hues at distance. Landform textures appear smooth to granular while the vegetation is irregular to patchy with clumps. Vegetation exhibits a matte texture and vegetation colors include tans to pale yellow for grasses with muted to light and dark greens and tans

Figure 2.3-1. SDG&E 69 kV Transmission Line Key Viewpoints
[CLICK HERE TO VIEW](#)

for the shrubs. The boulder slopes and jagged ridges of the Sierra de Juárez Mountains and the availability the panoramic vista view enhance visual variety and interest. The BLM interim scenic quality classification is Class C and viewer sensitivity is rated HIGH. The resulting VRM Classification is rated Class III. The VRM Class III Management Objective is as follows:

VRM Class III. To partially retain the existing character of the landscape. The level of change to the characteristic landscape should be [no greater than] 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.

Sempra Baja Wind Transmission (Mexico to U.S.) and SDG&E Jacumba Substation

The Jacumba 500/230 kV and 230/69 kV Substations and 500 kV Baja Wind Transmission Line would be located on the flat mesa west of the Sierra de Juárez Mountains, south of Old Highway 80 and the existing SWPL transmission line, and east of the community of Jacumba. The mesa landscape supports a low diversity of vegetation, composed primarily of short grass and shrubs. The surrounding rugged mountain ranges add visual interest to an otherwise relatively non-descript desert landscape. Notable built features in the landscape include the SWPL transmission line with its structurally complex towers, Old Highway 80 and the Jacumba airstrip — both linear ribbons of asphalt, and the border fence, which crosses the mesa and then ascends the western flank of the Sierra de Juárez Mountains.

Views of the substation complex and the 500 kV transmission line would be available from Old Highway 80, I-8, Table Mountain ACEC, and Anza-Borrego Desert State Park to the north; Jacumba Wilderness and several BLM access roads to the east; and the community of Jacumba to the west. One Key Viewpoint (KVP 79) was selected to capture a representative portion of the visual setting in the vicinity of the substations. The location of KVP 79 is shown on Figure 2.3-1 and a discussion of the existing visual setting is presented in the following paragraphs.

Key Viewpoint 79 – Old Highway 80 (VS-VC)

Key Viewpoint 79 was established on eastbound Old Highway 80, west of the substation site (see Figure 2.3-2). Viewing to the southeast across the flat mesa toward the Sierra de Juárez Mountains, this location was selected to generally characterize the existing landscape visible to travelers on Old Highway 80 and nearby BLM access roads. This land area is adjacent and to the immediate south of the existing SWPL transmission line.

Visual Quality. Moderate. The view from KVP 79 encompasses a foreground to middleground, relatively non-descript, flat, grass- and shrub-covered desert mesa landscape with prominent utility towers (to the left of the frame of view presented in Figure 2.3-2) exhibiting complex structural form and substantial industrial character. The dominant, rugged and angular landform of the Sierra de Juárez Mountains provides a backdrop that adds visual variety and interest. Views are open and unobstructed with available panoramic sightlines. Overall, the general lack of visual variety creates a landscape with moderate visual appeal.

Viewer Concern. High. Travelers on Old Highway 80 are provided panoramic views across a broad, flat desert mesa to distant mountain ranges. Although some travelers may anticipate the energy infrastructure (SWPL transmission line) as it parallels and then diverges from Old Highway 80, any addition of industrial character to the otherwise predominantly natural appearing landscape or blockage of views to more valued landscape features (Sierra de Juárez Mountains) would be seen as an adverse visual change in the landscape.

Viewer Exposure. Moderate-to-high. The Jacumba Substation and Baja Wind 500 kV transmission line would be highly visible in the foreground to middleground of views from Old Highway 80 and local BLM access roads. The number of viewers would be low-to-moderate and the duration of view would be extended. Combining these four equally weighted factors gives an overall moderate-to-high viewer exposure.

Overall Visual Sensitivity. Moderate-to-high. For travelers on Old Highway 80 and nearby BLM access roads, combining the equally weighted moderate visual quality, high viewer concern, and moderate-to-high viewer exposure results in an overall moderate-to-high visual sensitivity of the visual setting and viewing characteristics.

SDG&E 69 kV Transmission Line

The 69 kV transmission line would be located adjacent and to the south of the existing SWPL transmission line, extending approximately nine miles west from Jacumba Substation. From there, the line would diverge from the SWPL corridor, and head north for approximately 4.5 miles to the existing Boulevard Substation, located just south of Old Highway 80 in the rural community of Boulevard. The route would pass through an arid landscape supporting a relatively low diversity of vegetation and composed primarily of short grass and shrubs. Informal groupings of trees are more prevalent in Jewel Valley and in the vicinity of Boulevard. The surrounding rugged mountain ranges add visual interest to the arid desert and rural residential landscapes. Notable built features in the vicinity of the route include the SWPL transmission line with its structurally complex towers, Old Highway 80, a rail line, the community of Jacumba, Boulevard Substation, and numerous rural residences in the vicinity of Jewel Valley and Boulevard.

Views of the transmission line would be available from Interstate 8, Old Highway 80, Table Mountain ACEC, Anza-Borrego Desert State Park, Jacumba Wilderness, several BLM access roads, and local roads and residences within the communities of Jacumba and Boulevard. Two Key Viewpoints (KVPs 80 and 81) were selected to capture representative portions of the visual setting in the vicinities of Jacumba and Boulevard. The location of KVPs 80 (Jacumba) and 81 (Tule Jim Lane in Boulevard) are shown on Figure 2.3-1. A discussion of the existing visual settings for these two KVPs is presented in the following paragraphs.

Key Viewpoint 80 – Jacumba (VS-VC)

Key Viewpoint 80 was established on Jacumba Street, just north of Calexico Avenue in Jacumba (see Figure 2.3-3). The view from KVP 80 encompasses the existing SWPL transmission line and the proposed 69 kV route as it crosses a ridge north of the community of Jacumba. This location was selected to generally characterize the existing landscape visible to residents of Jacumba that would be in close proximity to the 69 kV transmission line with open, unobstructed views of the line.

Visual Quality. Low-to-Moderate. Viewing to the north-northeast, the foreground landscape is comprised of a rural residential neighborhood backdropped by a rugged, rocky ridge supporting the existing SWPL transmission line. Vegetation includes a variety of trees in the residential area, with short grasses and shrubs the predominant native vegetation. Overall, the landscape is lacking in visual variety, vividness, and uniqueness.

Viewer Concern. High. While local residents anticipate the presence of the existing SWPL line along the ridge to the north, the introduction of an additional line with a pronounced industrial character and additional view blockage of sky due to structure skylining, would be seen as an adverse visual change in the landscape.

Viewer Exposure. Moderate-to-high. The proposed route would be highly visible, though partially screened, in the foreground of views from Jacumba in general and KVP 80 specifically as the route passes to the north of Jacumba. While the number of viewers would be low, the duration of view would be extended. Combining these four equally weighted factors gives an overall moderate-to-high viewer exposure.

Overall Visual Sensitivity. Moderate-to-high. For residents of Jacumba, combining the equally weighted low-to-moderate visual quality, high viewer concern, and moderate-to-high viewer exposure results in an overall moderate-to-high visual sensitivity of the visual setting and viewing characteristics.

Key Viewpoint 81 – Tule Jim Lane – in Boulevard (VS-VC)

Key Viewpoint 81 was established on Tule Jim Lane, near the intersection with Tule Jim Road, and approximately 0.55 miles north of the intersection with Jewel Valley Road (see Figure 2.3-4). The view from KVP 81 encompasses a portion of Jewel Valley, an existing wood-pole utility line and the prominent Boundary Peak near the border with Mexico. The proposed 69 kV transmission line would cross the valley several times before turning east in parallel with the SWPL transmission line, just north of Boundary Peak. This location was selected to generally characterize the existing landscape visible to the rural residents of Jewel Valley that would be in close proximity to the 69 kV transmission line with open, unobstructed views of the line.

Visual Quality. Moderate. Viewing to the south, the foreground to middleground rural residential desert basin is comprised of shrubs and informal groupings of trees, surrounded by rolling to angular, rocky ridges. The SWPL transmission line is faintly visible as it crests a distant ridgeline. Boundary Peak is a prominent landform and a simple wood-pole utility line is a prominent roadside feature as it passes through the valley.

Viewer Concern. High. Rural residents and travelers in Jewel Valley are provided panoramic views across a shallow, desert basin to surrounding mountain ridges. Although some residents and travelers may anticipate the presence of the existing wood-pole utility line, any addition of industrial character to the predominantly natural appearing landscape or blockage of views to more valued landscape features (background ridges or Boundary Peak) would be seen as an adverse visual change in the landscape.

Viewer Exposure. Moderate-to-high. The proposed route would be highly visible in the foreground to middleground of views from Jewel Valley in general and KVP 81 specifically, as the route passes through Jewel Valley and connects to Boulevard Substation. While the number of viewers would be low, the duration of view would be extended. Combining these four equally weighted factors gives an overall moderate-to-high viewer exposure.

Overall Visual Sensitivity. Moderate-to-high. For residents and travelers within Jewel Valley, combining the equally weighted moderate visual quality, high viewer concern, and moderate-to-high viewer exposure results in an overall moderate-to-high visual sensitivity of the visual setting and viewing characteristics.

SDG&E Boulevard Substation Expansion

The interconnection of a 69 kV transmission line with the Boulevard Substation would require an expansion of the existing Boulevard Substation. The existing substation occupies less than $\frac{1}{4}$ acre of land and would need to be expanded to just over $\frac{3}{4}$ acre. The expansion would take place on the north-west side of the existing site. The substation site is located in an arid landscape supporting a relatively low diversity of vegetation and composed primarily of short grass and shrubs though informal groupings

of trees are more prevalent in the vicinity of Boulevard. The surrounding rugged rocky ridges add visual interest to the arid desert and rural residential landscapes. Built features in the vicinity of the site include the existing Boulevard Substation to be replaced, an existing wood-pole utility line, and nearby rural residences.

Views of the substation site would be available from Old Highway 80, local roads including Tule Jim Lane and Eady Lane, and numerous nearby rural residences within the community of Boulevard. One Key Viewpoint (KVP 82) was selected to capture the visual setting in the vicinity of the substation site. The location of KVP 82 is shown on Figure 2.3-1. A discussion of the existing visual setting is presented in the following paragraphs.

Key Viewpoint 82 – Old Highway 80 in Boulevard (VS-VC)

Key Viewpoint 82 was established on Old Highway 80, near the existing Boulevard Substation (see Figure 2.3-5A). The view from KVP 82 encompasses the existing Boulevard Substation in a portion of the rural community of Boulevard, just south of Old Highway 80. An existing wood-pole utility line connecting with the substation is also visible as are several rural residences. The proposed substation expansion/replacement would include the existing site as well as additional land contiguous to the northwest side of the site. This viewpoint location was selected to generally characterize the existing landscape visible to the rural residents in close proximity to the substation site and travelers on the adjacent local roads including Old Highway 80.

Visual Quality. Moderate. Viewing to the southwest, the foreground rural residential landscape is comprised of shrubs and informal groupings of trees, surrounded by rolling to angular, rocky ridges and boulder slopes. The Boulevard Substation is prominently visible as an industrial feature in a rural landscape otherwise absent similar features. Much of the surrounding landscape is natural in appearance.

Viewer Concern. High. Rural residents and travelers Old Highway 80 and on local roads in the community of Boulevard are provided panoramic views across a shallow, desert basin to surrounding rocky mountain ridges and rugged undeveloped slopes. Although some residents and travelers may anticipate the presence of the existing Boulevard Substation and wood-pole utility line, these features are relatively small in scale and partially obscured by trees and vegetation. Therefore, any expansion of the substation that would increase facility prominence within, add industrial character to, or increase view blockage of the existing landscape, would be seen as an adverse visual change in the landscape.

Viewer Exposure. Moderate-to-high. The new substation would be highly visible in the foreground of views from Old Highway 80, rural residences and local roads in Boulevard in general and KVP 82 specifically. While the number of viewers would be low-to-moderate, the duration of view would be extended. Combining these four equally weighted factors gives an overall moderate-to-high viewer exposure.

Overall Visual Sensitivity. Moderate-to-high. For residents and travelers within the vicinity of Boulevard, combining the equally weighted moderate visual quality, high viewer concern, and moderate-to-high viewer exposure results in an overall moderate-to-high visual sensitivity of the visual setting and viewing characteristics.

SDG&E Communication Facility

The White Star Communication Facility would replace two existing wooden poles with one 75-foot-tall steel monopole. Multiple communication and cell phone towers exist at and adjacent to the White Star Communication Facility. Because the new monopole would replace two existing towers and would not significantly change the existing visual setting at the White Star facility there would be no visual impact from the operation of the communication facility. Figure 2.3-9 depicts the existing view at the White Star Communication Site.

2.3.2 Environmental Impacts and Mitigation Measures – Visual Resources

The RWEPP and the required transmission, substation, and communication components would result in five additional significant and unmitigable (Class I) impacts when compared with the RWD Project and Jacumba Substation analyzed in the Sunrise Draft EIR/EIS. Many of these impacts are visual impacts of the wind project to sensitive viewers in the United States, due to the location change and expansion of the RWEPP. One additional significant and unmitigable construction impact would occur due to the length of construction time required for the wind project in Mexico.

Table 2.3-1 shows the level of significance of each visual impact for the Sempra RWEPP and associated components. This table compares the significance of each visual impact as identified in the January 2008 Sunrise Powerlink Draft EIR/EIS, and as identified in this recirculated Draft EIR/EIS. Detailed discussions of each impact and the specific locations where each impact is identified are presented in the following sections. The complete impact analysis from the January 2008 Sunrise Powerlink Draft EIR/EIS is presented in Appendix 1.

Table 2.3-1. Comparison of Impacts Identified – Visual Resources

Impact No.	Description	Impact Significance	
		Draft EIR/EIS	Recirculated Draft EIR/EIS
V-1	Short-term visibility of construction activities, equipment, and night lighting		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II, Class III	Class I, Class II, Class III
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II, Class III
V-2	Long-term visibility of land scars and vegetation clearance in arid and semi-arid landscapes		
	Wind Project in Mexico, Transmission Line to U.S.	Class I, Class II	Class I, Class II
	Jacumba Substation	Class II	Class II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II, No Impact
V-87	Increased structure contrast, industrial character, view blockage, skylining, and glare from night lighting when viewing the Jacumba Substation from Key Viewpoint 79 on Old Highway 80, west of the Jacumba Substation site (<i>V-NW4 for Sunrise Draft EIR/EIS</i>)		
	Jacumba Substation	Class I	Class I
V-94	Long-term visibility of RWD turbines and associated facilities from Highway Mexico 2, nearby residences and public roads (<i>V-LR3 for Sunrise Draft EIR/EIS</i>)		
	Wind Project in Mexico, Transmission Line to U.S.	Class I	Class I

Table 2.3-1. Comparison of Impacts Identified – Visual Resources

V-LR4	Increased industrial character, view blockage, and skylining associated with new 230 kV transmission line along the 8.7 miles of new ROW and along existing ROW		
	Transmission Line to U.S.	Class I, Class III	n/a
V-88	Increased structure contrast, industrial character, view blockage, and skylining when viewing the 69 kV transmission line from Key Viewpoint 80 on Jacumba Street in Jacumba		
	69 kV Transmission Line	n/a	Class III
V-89	Increased structure contrast, industrial character, view blockage, and skylining when viewing the 69 kV transmission line from Key Viewpoint 81 on Tule Jim Lane in Boulevard		
	69 kV Transmission Line	n/a	Class I
V-90	Increased structure contrast, industrial character, view blockage, skylining, and glare from night lighting when viewing the Boulevard Substation from Key Viewpoint 82 on Old Highway 80		
	Boulevard Substation Expansion	n/a	Class I
V-91	Increased structure contrast, industrial character, view blockage, and skylining when viewing the wind development area from Key Viewpoint 83 on Hill Street in Jacumba		
	Wind Project in Mexico	n/a	Class I
V-92	Inconsistency with BLM VRM Class II Management objective due to introduction of structure contrast, industrial character, view blockage and skylining when viewing the wind farm development from Key Viewpoint 84 on Table Mountain		
	Wind Project in Mexico	n/a	Class I
V-93	Inconsistency with BLM VRM Class III Management objective due to introduction of structure contrast, industrial character, view blockage and skylining when viewing the wind farm development from Key Viewpoint 85 in the Elliot Mine Area		
	Wind Project in Mexico	n/a	Class I

Significance Criteria. The criteria used to assess the significance of visual impacts resulting from the Sempra Presidential Permit and related facilities are the same as the significance criteria for the Sunrise Powerlink and a take into consideration federal, State, and local policies and guidelines pertaining to visual resources. Appendix G of the CEQA Guidelines identifies four circumstances that can lead to a determination of significant visual impact. These have been adapted as set forth below for the analysis that follows:

- Project construction or the long-term presence of project components would cause a substantial effect on a scenic vista.
- Project construction or the long-term presence of project components would substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within view of a State Scenic Highway.
- Project construction or the long-term presence of project components would substantially degrade the existing visual character or quality of the site and its surrounding landscape. [Note: Substantial degradation results from higher levels of visual contrast, project dominance, and view blockage. Visual contrast relates to spatial characteristics, visual scale, texture, form, line, and color.]
- Project construction or the long-term presence of the Proposed Project would create a new source of substantial light or glare that would adversely affect day or nighttime views in the area or be hazardous to motorists or pedestrians.

Four additional criteria that can lead to a determination of significant visual impact include:

- The presence of the Proposed Project or Alternative would result in a long-term (greater than three years) inconsistency with established (or interim) BLM Visual Resource Management Class objectives (applies only to public lands administered by the BLM). This would typically occur where a landscape with a relatively high visual quality and viewer concern is noticeably altered.
- The presence of the Proposed Project or Alternative would result in an inconsistency with Cleveland National Forest Land Management Plan Aesthetic Management Standard S9 requiring activities to meet the applicable Scenic Integrity Objective (SIO), and it does not qualify as an exception under Aesthetic Management Standard S10, which allows a minor adjustment (one level reduction with approval) to the SIO, or a temporary drop of more than one SIO not to exceed three years in duration.
- Construction of the Proposed Project or the presence of project components would result in an inconsistency with local regulations, plans, and standards applicable to the protection of visual resources.
- The presence of the Proposed Project would add to a cumulative visual alteration.

More information regarding the **Visual Sensitivity–Visual Change methodology**, can be found in Table D.3-9 in the Sunrise Draft EIR/EIS (January, 2008).

The Sempra Presidential Permit related facilities would result in significant (Class I and Class II) and adverse but less than significant (Class III) construction impacts (Impacts V-1 and V-2) and significant (Class I) and adverse but less than significant (Class III) long-term operational visual impacts (V-87 through 93).

Construction Impacts

The following discussion of construction impacts would apply equally to facilities located either in Mexico or the U.S.

Impact V-1: Short-term visibility of construction activities, equipment, and night lighting (Classes I, II, and III)

Sempra RWEP (Class I and Class II). Construction activities at the RWEP Wind Farm site would be similar to those described above for the Proposed Project in Section D.3.5 and would include the visual intrusion of construction vehicles, equipment, materials, and work force at the site. While the construction impacts would be temporary, they would be of an estimated duration of between four and five years. While construction night lighting impacts could be mitigated to a level that would be less than significant (**Class II**), the impact associated with the visibility of construction activities and equipment could not (**Class I**). The large scale and extent of the impact area could not be adequately screened from view because of the numerous sightlines to the elevated (ridge top) construction area. Even though the significant construction impacts are unavoidable, Mitigation Measures V-1a through V-1c are recommended to ensure that viewers are not unnecessarily impacted during construction.

SDG&E Jacumba Substation, SDG&E Boulevard Substation Expansion, Construction and Storage Yards, and Fly Yards (Class II). Construction impacts on visual resources would result from the presence and visual intrusion of construction vehicles, equipment, materials, and workforce at Jacumba Substation, construction and storage yards, and fly yards. Construction impacts on visual resources would also result from the temporary use of night lighting if night lighting is not appropriately controlled at these construction sites. Construction equipment and activities would be seen by various viewers in close proximity to the construction sites including rural residents in Jacumba, as well as travelers and recreationists on I-8, Old Highway 80, local roads in Jacumba and Boulevard, numerous BLM access roads, and

recreation areas including Table Mountain ACEC, Anza-Borrego Desert State Park, Jacumba Wilderness, and the Elliot Mine area. Construction impacts could last two years and the resulting visual impacts would be significant but mitigable (**Class II**). Mitigation Measures V-1a through V-1c (full text presented above) are required to reduce the impacts to levels that would be less than significant.

Sempra Baja Wind Transmission Line, SDG&E 69 kV Transmission Line, SDG&E Communication Facility (Class III). Construction impacts on visual resources would result from the presence and visual intrusion of construction vehicles, equipment, materials, and work force along the transmission line routes. Construction impacts on visual resources would also result from the temporary alteration of landforms and vegetation along the ROW. Vehicles, heavy equipment, project components, and workers would be visible during access and spur road clearing and grading, structure erection, conductor stringing, and site/ROW clean-up and restoration. Construction equipment and activities would be seen by various viewers in close proximity to the ROWs including rural residents in Jacumba and Boulevard as well as travelers and recreationists on I-8, Old Highway 80, local roads in Jacumba and Boulevard, numerous BLM access roads, and recreation areas including Table Mountain ACEC, Anza-Borrego Desert State Park, and Jacumba Wilderness. View durations from these vantage points would vary from moderate to extended. However, construction activities along the transmission line route and at the White Star Communication Facility would be transient and of short duration as construction progresses along the routes. As a result, affected viewers would be aware of the temporary nature of project construction impacts, which would decrease their sensitivity to the impact. The resulting visual impacts would be adverse but less than significant (**Class III**).

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact V-1: Visibility of construction activities, equipment, and night lighting

V-1a Reduce visibility of construction activities and equipment.

V-1b Reduce construction night lighting impacts.

V-1c Prohibit construction marking of natural features. [VR-APM-4]

Impact V-2: Long-term visibility of land scars and vegetation clearance in arid and semi-arid landscapes (Classes I and II, No Impact)

Sempra RWEP (Class I). The installation of new structures and construction of new access/spur roads would cause disturbance of soils and vegetation as vehicles and equipment access the wind turbine installation areas and equipment and materials are moved. Mitigation Measures V-2a through V-2f are recommended in order to reduce impacts. However, given the extensive network of permanent access and spur roads that would be required for the RWEP Wind Farm, primarily along ridge lines and their slopes, even with mitigation, it is likely that Impact V-2 could not be reduced to an insignificant level (**Class I**).

Sempra Baja Wind Transmission Line, SDG&E Jacumba Substation, SDG&E 69 kV Transmission Line, SDG&E Boulevard Substation Expansion, Construction and Storage Yards, Fly Yards (Class II). Land scarring from use of staging areas and construction yards, construction of new access and spur roads, and activities adjacent to construction sites and along the ROW can be long-lasting (several years) in arid and semi-arid environments where vegetation recruitment and growth are slow. In-line views of linear land scars or newly bladed roads are particularly problematic and introduce adverse visual change and contrast by causing unnatural vegetative lines and soil color contrast from newly exposed

soils. Vegetation clearance could occur in conjunction with project construction or during the life of the project if vegetation is cleared as part of ongoing ROW maintenance or if a changed vegetation structure is maintained within the right of way.

Long-term land scarring and vegetation clearance impacts would constitute potentially significant visual impacts that could likely be mitigated to levels that are less than significant (**Class II**) with effective implementation of Mitigation Measures V-2a (Reduce in-line views of land scars), V-2b (Reduce visual contrast from unnatural vegetation lines), V-2c (Reduce color contrast), V-2e (Minimize vegetation removal), and V-2f (Restrict vehicle travel and restore land). However, if site-specific conditions indicate that the mitigation measures would not be effective in eliminating unnatural demarcations in the vegetation landscape and reducing the resulting visual impact to a level that would be less than significant, then Mitigation Measure V-2d (Construction by helicopter) would be required following consultations with the CPUC and USBLM as appropriate.

SDG&E Communication Facility. The construction at the White Star Communication Facility would occur on already disturbed land at a site where six communication towers already exist. The new 75-foot monopole would replace two existing wooden communication towers on already cleared land and as such would not result in significant land-scarring and vegetation clearing impacts (No Impact).

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact V-2: Long-term visibility of land scars and vegetation clearance in arid and semi-arid landscapes

- V-2a Reduce in-line views of land scars.**
- V-2b Reduce visual contrast from unnatural vegetation lines.**
- V-2c Reduce color contrast of land scars on non-Forest lands.**
- V-2d Construction by helicopter.**
- V-2e Minimize vegetation removal. [BIO-APM-23]**
- V-2f Reduce land scarring and vegetation clearance impacts on USFS-administered lands.**

Operational Impacts

The Semptra Presidential Permit and related facilities would result in visual impacts that would range from adverse and significant (**Class I**) to adverse but less than significant (**Class III**). At the end of the construction periods for the various facilities and during project operations, the wind farm, substations, and transmission lines would be highly visible from nearby residences and roads. Long-term, operational visual impacts would be experienced by: (a) residents of La Rumorosa, Jacumba, and Boulevard; (b) travelers on Highway Mexico 2, Interstate 8, Old Highway 80, Jewel Valley Road in Boulevard, and other local roads in Jacumba and Boulevard; and (c) recreationists accessing the southern end of Anza-Borrego Desert State Park and BLM-administered lands including Table Mountain ACEC, the Elliot Mine area, and Jacumba Wilderness. Seven representative Key Viewpoints (KVPs 79 through 85) were selected to characterize the visual impacts that would occur with implementation of the various components of this action including: (a) Jacumba Substation – KVP 79, (b) the 69 kV Transmission Line – KVPs 80 and 81, (c) Boulevard Substation – KVP 82, and (d) the wind development area – KVPs 83 through 85).

Impact V-87: Increased structure contrast, industrial character, view blockage, skylining, and glare from night lighting when viewing the Jacumba Substation from Key Viewpoint 79 on Old Highway 80, west of the Jacumba Substation site (VS-VC) (Class I)

Figure 2.3-2 presents the existing view to the southeast from Key Viewpoint 79 on Old Highway 80, west of the proposed Jacumba Substation site. The substation complex (consisting of a 500 kV/230 kV substation and a 230 kV/69 kV substation) would be built adjacent and slightly to the south of the existing SWPL line and south of Old Highway 80. The substations, the 500 kV interconnection from the wind development area and the 69 kV transmission feed to Boulevard substation would introduce an assemblage of complex structural forms and lines with substantial industrial character into a landscape that presently exhibits those characteristics (SWPL transmission line) but to a considerably lesser extent. The resulting visual contrast would be moderate-to-high. The co-dominant-to-dominant structures would cause a moderate-to-high degree of view blockage of the background mesa and mountain slopes. As a result, the overall visual change would be moderate-to-high. In the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be significant (Class I). There is no mitigation available to reduce the significant visual impact of the substation complex to a level that would be less than significant, aside from selection of an entirely different substation location. The open terrain and vast expanse of the desert mesa with relatively consistent visual character do not offer opportunities to either better screen the structures from view or blend them more effectively with a different background. Also, given the scale of the structures, landscape plantings would not be adequate to sufficiently screen the substation components. However, Mitigation Measures V-7a, V-7b, and V-21a are recommended to further reduce the visual impact of the new Jacumba Substation. This viewpoint analysis is considered representative of views of the substation and connecting transmission lines from the immediate vicinity of the substation site.

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measure for Impact V-87: Increased structure contrast, industrial character, view blockage, skylining, and glare from night lighting when viewing the Jacumba Substation from KVP 79 on Old Highway 80, west of the Jacumba Substation site

- V-7a Reduce visual contrast associated with ancillary facilities.**
- V-7b Screen ancillary facilities.**
- V-21a Reduce night lighting impacts.**

Figure 2.3-2. Key Viewpoint 79: Old Highway 80 – Existing View
[CLICK HERE TO VIEW](#)

Impact V-88: Increased structure contrast, industrial character, view blockage, and skylining when viewing the 69 kV transmission line from Key Viewpoint 80 on Jacumba Street in Jacumba (VS-VC) (Class III)

Figure 2.3-3 presents the existing view to the north-northeast from Key Viewpoint 80 on Jacumba Street, just north of Calexico Avenue in Jacumba. The 69 kV transmission line would be built adjacent and slightly to the south of the existing SWPL line. The new line would appear different in design (simple steel-pole) and height (shorter) compared to the existing SWPL line. The shorter structures would result in shorter conductor spans that would be asynchronous with the existing SWPL spans. Additional view blockage of the background sky would occur and there would be an increase in industrial character along the ridge. The resulting visual contrast would be moderate and the new transmission line would appear co-dominant compared to the existing landscape features including the vertical forms of the existing transmission line structures, the horizontal form of the ridge, and the foreground residential structures. View blockage of the background sky would be low. The overall visual change would be low-to-moderate when the three equally weighted factors of visual contrast, project dominance, and view blockage are combined. In the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be adverse but less than significant (Class III). However, Mitigation Measure V-3a is recommended to reduce the visual impact along this portion of the alternative. While Impact V-88 is less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2). This viewpoint analysis is considered representative of views of the 69 kV transmission line from the rural community of Jacumba.

[The full text of Mitigation Measure V-3a is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measure for Impact V-88: Increased structure contrast, industrial character, view blockage, and skylining when viewing the 69 kV transmission line from Key Viewpoint 80 on Jacumba Street in Jacumba

V-3a Reduce visual contrast of towers and conductors.

Figure 2.3-3. Key Viewpoint 80: Jacumba – Visual Simulation
[CLICK HERE TO VIEW](#)

Impact V-89: Increased structure contrast, industrial character, view blockage, and skylining when viewing the 69 kV transmission line from Key Viewpoint 81 on Tule Jim Lane in Boulevard (VS-VC) (Class I)

Figure 2.3-4 presents the existing view to the south from Key Viewpoint 81 on Tule Jim Lane, near the intersection with Tule Jim Road, and approximately 0.55 miles north of the intersection with Jewel Valley Road. The 69 kV transmission line would be structurally prominent and would introduce a noticeable industrial character into a landscape presently absent similar features. The transmission line would parallel several unpaved roads and cross the valley several times north of Boundary Peak. The transmission line would also cause additional view blockage of background ridges and Boundary Peak. The resulting visual contrast would be moderate-to-high and the new transmission line would appear co-dominant compared to the existing landscape features. View blockage of the background landforms would be moderate. The overall visual change would be moderate when the three equally weighted factors of visual contrast, project dominance, and view blockage are combined. In the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be adverse and significant (Class I). There is no mitigation available to reduce the significant visual impact to a level that would be less than significant along this route, aside from selection of an entirely different route and landscape setting. The relatively open terrain and consistent backdrop along this route segment do not offer opportunities to either better screen the structures from view or blend them more effectively with a different background. Therefore, localized reroutes would not be effective. Also, with the availability of both close and distant views of the route, different structure designs would not be effective in reducing the visual impact to a level that would be less than significant. However, Mitigation Measure V-3a is still recommended to reduce the visual impact along this portion of the alternative in compliance with NEPA.

Alternatively, the mitigation reroutes depicted in Figure [2.3-4A](#) ~~2.3-10~~ would reduce Impact V-89. Figure 2.3-4A depicts a northern mitigation route and a southern mitigation route that follow the I-8 Alternative Route to a point just south of the I-8 span, turning west from there to generally follow Old Highway 80 to Boulevard Substation. The routes would impact approximately a dozen affected residences, which would be significantly less than the original proposal. The visual impact on rural residences would be substantially reduced with either the northern or southern mitigation option. The green (north) option would cause more impact on Old Highway 80 but would still result in less visual impact overall compared to the proposed route. While the route options in the vicinity of the rural residences east and southeast of the substation would still cause Class I visual impacts, the extent of the Class I impact areas would be substantially reduced compared to the proposed route. This viewpoint analysis is considered representative of project views within Jewel Valley and in proximity to the route in the vicinity of Boulevard (Class I).

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measure for Impact V-89: Increased structure contrast, industrial character, view blockage, and skylining when viewing the 69 kV transmission line from 81 on Tule Jim Lane in Boulevard

- V-3a** **Reduce visual contrast of towers and conductors.**
- V-89a** **Relocate 69 kV transmission line along northern or southern mitigation route as shown in Figure 2.3-4A.**

Figure 2.3-4. Key Viewpoint 81: Tule Jim Lane – South – Existing View

[CLICK HERE TO VIEW](#)

Figure 2.3-4A. SDG&E 69 kV Transmission Line Mitigation Options

[CLICK HERE TO VIEW](#)

Impact V-90: Increased structure contrast, industrial character, view blockage, skylining, and glare from night lighting when viewing the Boulevard Substation from Key Viewpoint 82 on Old Highway 80 (VS-VC) (Class I)

Figure 2.3-5A presents the existing view from Key Viewpoint 82 on Old Highway 80 in Boulevard. Figure 2.3-5B presents a visual simulation that shows the replacement of the existing Boulevard Substation with a larger substation. The substation would introduce an assemblage of complex structural forms and lines with substantial industrial character into a predominantly rural landscape that presently contains some features of similar character (existing Boulevard Substation) but to a lesser extent. The resulting visual contrast would be moderate-to-high. The co-dominant structures would cause a moderate degree of view blockage of sky and the surrounding ridges and rocky slopes from certain vantage points). As a result, the overall visual change would be moderate. In the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be significant (Class I). There is no mitigation available to reduce the significant visual impact of the substation complex to a level that would be less than significant, aside from selection of an entirely different substation location. The open terrain with relatively consistent visual character and availability of elevated sightlines to the substation site do not offer opportunities to either better screen the structures from view or blend them more effectively with a different background. Also, given the scale of the structures, landscape plantings would not be adequate to sufficiently screen the substation components. However, Mitigation Measures V-7a, V-7b, and V-21a are recommended to further reduce the visual impact of the new Boulevard Substation. This viewpoint analysis is considered representative of views of the substation from the immediate vicinity of the substation site. [The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measure for Impact V-90 Increased structure contrast, industrial character, view blockage, skylining, and glare from night lighting when viewing the Boulevard Substation from Key Viewpoint 82 on Old Highway 80

- V-7a** **Reduce visual contrast associated with ancillary facilities.**
- V-7b** **Screen ancillary facilities.**
- V-21a** **Reduce night lighting impacts.**

Impact V-91: Increased structure contrast, industrial character, view blockage, and skylining when viewing the wind development area from Key Viewpoint 83 on Hill Street in Jacumba (VS-VC) (Class I)

Figure 2.3-6 presents the existing view to the east from Key Viewpoint 83 on Hill Street, just south of Old Highway 80 in Jacumba, west of the wind development area. The wind development project would include the installation of approximately 500 2.5 MW turbines (or approximately 625 2 MW turbines) along the western side of the Sierra de Juárez Mountains. The numerous wind turbines would blanket the mountain slopes and appear as an assemblage of light-colored vertical forms in a landscape predominantly natural in appearance and presently lacking similar features. The resulting visual contrast would be moderate-to-high at this viewing distance. The co-dominant-to-dominant structures would cause a high degree of view blockage of the background mountain slopes and sky. As a result, the overall visual change would be moderate-to-high. In the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be significant (Class I). There is no mitigation available to reduce the significant visual impact of the wind farm to a level that would be less than significant, aside from selection of an entirely different development location. The open and highly exposed location along with numerous viewing locations do not lend the site to opportunities to either better screen the structures from view or blend them more effectively with a different background. Also, given the scale of the structures, landscape plantings would not be adequate to sufficiently screen the turbines from view. Therefore, no mitigation measures are recommended.

Figure 2.3-5A. Key Viewpoint 82: Old Highway 80 – Existing View

[CLICK HERE TO VIEW](#)

Figure 2.3-5B. Key Viewpoint 82: Old Highway 80 – Simulation

[CLICK HERE TO VIEW](#)

Figure 2.3-6. Key Viewpoint 83: Hill Street in Jacumba – Existing View

[CLICK HERE TO VIEW](#)

Impact V-92: Inconsistency with BLM VRM Class II Management objective due to introduction of structure contrast, industrial character, view blockage and skylining when viewing the wind farm development from Key Viewpoint 84 on Table Mountain (Class I)

Figure 2.3-7A presents the existing view to the south-southeast toward the north end of the Sierra de Juárez Mountains, from Key Viewpoint 84 on the southeast shoulder of Table Mountain. Figure 2.3-7B presents a visual simulation of the wind development area following installation of wind turbines along the western slopes of the Sierra de Juárez Mountains and substation complex south of Old Highway 80. The view of the wind development area from Table Mountain and the southern end of Anza-Borrego Desert State Park would be open and unobstructed. The numerous wind turbines and substation complex would be prominently visible to recreationists in the ACEC and State Park and would substantially alter the predominantly natural character of the landscape. The resulting structural visual contrast (for form and line) would be strong.

The BLM's Visual Resource Management (VRM) Class II objective allows for a low degree of visual change, that should not attract the attention of the casual observer. Also, any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. The high level of change that would be caused by the new facilities would not meet the VRM Class II objective of a low degree of visual change. The wind turbines with their vertical structural forms and the industrial-appearing and structurally complex substation would not repeat the basic elements of the existing natural features in the landscape (rugged, rocky ridges and flat horizontal mesa). Also, the proposed structures would be prominent built features in the landscape. Therefore, the high level of visual change that would be caused by the wind farm and substation complex would not be consistent with the applicable VRM Class II management objective and the resulting visual impact would be significant (Class I). Although there is no mitigation available to reduce the significant visual impact to a level that would be less than significant, the following mitigation measures are recommended to reduce the visual impact of the project in compliance with NEPA requirements. [The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measures for Impact V-92: Inconsistency with BLM VRM Class II Management objective due to introduction of structure contrast, industrial character, view blockage and skylining when viewing the wind farm development from Key Viewpoint 84 on Table Mountain

V-3a Reduce visual contrast of towers and conductors.

V-3b Use non-specular design to reduce conductor visibility and visual contrast. [VR-APM-2]

It should be noted that the BLM's VRM methodology was used to evaluate the visual impact from Key Viewpoint 84 on Table Mountain because the viewpoint is located on lands administered by the BLM. However, this methodology would not apply to views from Anza-Borrego Desert State Park (ABDSP). Although the Visual Sensitivity – Visual Change (VS-VC) methodology would be the appropriate approach for ABDSP views, the conclusion would be the same. Under the VS-VC methodology, the moderate-to-high degree of visual change that would occur within the context of the overall moderate-to-high visual sensitivity would result in a significant (Class I) visual impact.

Figure 2.3-7A. Key Viewpoint 84: Table Mountain – Existing View

[CLICK HERE TO VIEW](#)

Figure 2.3-7B. Key Viewpoint 84: Table Mountain – Simulation

[CLICK HERE TO VIEW](#)

Impact V-93: Inconsistency with BLM VRM Class III Management objective due to introduction of structure contrast, industrial character, view blockage and skylining when viewing the wind farm development from Key Viewpoint 85 in the Elliot Mine Area (Class I)

Figure 2.3-8 presents the existing view to the south toward the north end of the Sierra de Juárez Mountains, from Key Viewpoint 85 in the Elliot Mine area, approximately three miles southeast of Old Highway 80. The view of the wind development area from the Elliot Mine area would be open and unobstructed. The numerous wind turbines would be prominently visible to recreationists and would substantially alter the predominantly natural character of the landscape. The resulting structural visual contrast (for form and line) would be strong.

The BLM's Interim Visual Resource Management (VRM) Class III objective allows for a moderate (or lower) degree of visual change. While the action may attract the attention of viewers, it should not dominate the view of the casual observer. Also, any resulting change should repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. The high level of change that would be caused by the new facilities would not meet the VRM Class III objective of a moderate (or lower) degree of visual change. The wind turbines with their vertical structural forms and industrial appearance would not repeat the basic elements of the existing natural features in the landscape (rugged, rocky ridges and shallow valleys).

Also, the proposed structures would be prominent to dominant built features in the landscape. Therefore, the high level of visual change that would be caused by the wind farm would not be consistent with the applicable VRM Class III management objective and the resulting visual impact would be significant (Class I). There is no mitigation available to reduce the significant visual impact to a level that would be less than significant and none are recommended.

Impact V-94: Long-term visibility of RWD turbines and associated facilities from Highway Mexico 2, nearby residences and public roads (Class I)

The La Rumorosa wind project would be highly visible from Highway Mexico 2 (both the toll section and the free section), the town of La Rumorosa, public roads, and rural residences, greatly intensifying the industrialization of the area. The wind turbines with their vertical structural forms and industrial appearance would not repeat the basic elements of the existing natural features in the landscape (rugged, rocky ridges and shallow valleys). Also, the proposed structures would be prominent to dominant built features in the landscape. The resulting visual impact would be significant (Class I). Because of the wind turbine height and the placement on rocky ridges, there is no mitigation available to reduce this visual impact to a less than significant level and none are recommended.

Figure 2.3-8. Key Viewpoint 85: Elliot Mine Area – Existing View

[CLICK HERE TO VIEW](#)

Figure 2.3-9. White Star Communication Site – Existing View

[CLICK HERE TO VIEW](#)

Table VR-1. Visual Resources - Summary of Key Viewpoint Analyses

[CLICK HERE TO VIEW](#)

2.4 Land Use

2.4.1 Environmental Setting – Land Use

Sempra RWEPP (Mexico). The wind project in Mexico would cover approximately 7,500 acres and would be located less than 1,000 feet north of the town of La Rumorosa, Mexico, and less than 1,000 feet from numerous rural residences on the outskirts of the town of La Rumorosa. There are also a few rural residences within the wind project site. Jurisdictions within or adjacent to the wind project in Mexico include the town of La Rumorosa, Mexico (population 1,615), Highway Mexico 2, and the communities (ejidos) Jácume and Cordillera Molina, owners of the land on which the RWEPP will be sited. Jurisdictions in the United States north of the wind project area include rural open space, and the BLM Jacumba Wilderness area.

Sempra Baja Wind Transmission Line (Mexico to U.S.). The 230 or 500 kV transmission line from the Sempra RWEPP to the SDG&E Jacumba Substation would require 3 miles of new overhead transmission line, located in approximately 214 feet of new permanent ROW and approximately 314 feet wide construction temporary ROW. The Baja Wind Transmission Line would be sited on private land in the U.S. and on land leased from the community Jácume in Mexico. Jurisdictions within 1,000 feet of the ROW include rural residential land in the United States and rural land within the community of Jácume in Mexico. Land uses include open space in the U.S. and open space/recreation in Mexico. Refer to Section 2.5, Wilderness and Recreation, for discussion of open space and recreational land uses within the Baja Wind Transmission ROW.

SDG&E Jacumba Substation. The Jacumba Substation would be located in eastern San Diego County, approximately 800 to 1,000 feet south of the existing SWPL transmission line, approximately 0.5 miles west of the San Diego/Imperial County border. It would require approximately 85 acres. The substation would be sited on private land. The site is vacant land, and relatively undisturbed except for the adjacent transmission line and its access roads. Other nearby land uses include Old Highway 80 approximately 1,000 feet northwest of the substation. The closest structures to the new substation, a truck stop and gas station, are approximately 2,100 feet away. Refer to Section 2.5, Wilderness and Recreation, for discussion of open space and recreational land uses near the Jacumba Substation.

SDG&E 69 kV Transmission Line. The new 69 kV transmission line would require approximately 9.3 miles of 69 kV transmission line ROW adjacent to the existing SWPL ROW and approximately 4 miles of new ROW. Jurisdictions traversed by this route are BLM, San Diego & Arizona Eastern Railway, County of San Diego, and the unincorporated town Boulevard. Land uses that would be traversed by this route include agriculture (cropland, grazing lands), commercial uses, public roadways (Old Highway 80, local roadways), San Diego & Arizona Eastern Railroad, recreational lands (open space including land purchased by The Nature Conservancy), residential (multi-family, rural, single-family), and water-related uses (Boundary Creek, Carrizo Creek, Lake Domingo).

Land use classifications along the 69 kV transmission line ROW include agriculture, parks and recreation/open space, public facilities and utilities, and residential uses. Table 2.4-1 identifies land uses in the vicinity of this route. There are approximately 40 residences within 1,000 feet of the transmission line. Refer to Section 2.5, Wilderness and Recreation, for discussions of open space and recreational land uses that occur along the 69 kV transmission line. Section 2.6, Agriculture, provides a discussion of agricultural land uses along the 69 kV transmission line.

Table 2.4-1. Land Uses Along 69 kV Transmission Line Route

Milepost	Jurisdiction	Land Use Classifications	Specific Land Uses within 1,000 feet
69 kV Transmission			
BL-0-1	BLM	Parks and Recreation/Open Space	Open Space
BL-1-2	BLM, County of San Diego	Parks and Recreation/Open Space, Residential	Open Space
BL-2-3	County of San Diego	Parks and Recreation/Open Space	Open Space
BL-3-4	County of San Diego	Agriculture, Commercial and Office, Parks and Recreation/Open Space	Forage Crops, Open Space, The Nature Conservancy, Two Gas Stations
BL-4-5	Union Pacific Railroad, County of San Diego	Agriculture, Parks and Recreation/Open Space, Public Facilities and Utilities	Forage Crops, Open Space, San Diego and Arizona Eastern Railroad
BL-5-6	County of San Diego	Parks and Recreation/Open Space, Public Facilities and Utilities, Residential	Open Space, Old Highway 80, Rural Residential*
BL-6-7	County of San Diego	Parks and Recreation, Residential	Open Space, Rural Residential*
BL-7-8	Union Pacific Railroad, County of San Diego	Parks and Recreation/Open Space, Public Facilities and Utilities, Residential	Open Space, San Diego and Arizona Eastern Railroad, Rural Residential*
BL-8-9	County of San Diego	Parks and Recreation/Open Space	Open Space
BL-9-10	County of San Diego	Parks and Recreation/Open Space	Open Space
BL-10-11	Union Pacific Railroad, County of San Diego	Parks and Recreation/Open Space, Public Facilities and Utilities, Residential	Open Space, San Diego and Arizona Eastern Railroad, Rural Residential*
BL-11-12	County of San Diego	Parks and Recreation/Open Space, Residential	Open Space, Rural Residential*
BL-12-13	County of San Diego	Parks and Recreation/Open Space, Residential	Open Space, Rural Residential*
BL-13-13.6	County of San Diego	Parks and Recreation/Open Space, Residential	Open Space, Rural Residential*

* Bold denotes sensitive land use (recreational uses have been excluded from this category as they are discussed in Section 2.5, Wilderness and Recreation). Refer to Section 2.6, Agriculture, for discussion of agricultural resources, and Section 2.8, Noise, for discussion of noise.

SDG&E Boulevard Substation Expansion. The Boulevard Substation is located at the end of Ozz Road, off of Old Highway 80. It is now a quarter-acre substation (about 11,000 square feet) would require an additional half-acre (about 22,000 square feet) of land to accommodate the additional 69 kV transmission line. The substation is located in a low-density residential area, so this expansion would likely require the purchase of additional private land. Jurisdictions adjacent to the Boulevard Substation are the County of San Diego and Boulevard. Land uses adjacent to the Boulevard Substation include public roadways (Old Highway 80, local roadways), and rural residential (multi-family, rural, single-family). There are approximately 9 residences within 1,000 feet of the Boulevard Substation.

SDG&E Communication Facility. The White Star Communication Tower is located north of the intersection of Shasta Way and Tierra del Sol Road. Jurisdictions adjacent to the White Star Communication Tower are the State of California, San Diego County, and the unincorporated town of Boulevard. Land uses adjacent to the White Star Communication Tower include public roadways, rural residential, state land, and utilities. There are approximately two residences approximately 1,000 feet from the White Star Communication Tower.

2.4.2 Environmental Impacts and Mitigation Measures – Land Use

The RWEP and the required transmission, substation, and communication components would result in one significant and unmitigable (Class I) operational impact compared with the RWD Project and Jacumba Substation analyzed in the Sunrise Draft EIR/EIS which would not result in any significant, unmitigable (Class I) impacts. The project components associated with the RWEP would require mitigation in order for impacts to be less than significant. In the absence of mitigation, both construction and operational impacts of the RWEP project components would be significant. The components of the RWD Project did not result in significant impacts and did not require mitigation.

Table 2.4-2 shows the level of significance of each land use impact for the Sempra RWEP and associated components. This table compares the significance of each land use impact as identified in the January 2008 Sunrise Powerlink Draft EIR/EIS, and as identified in this recirculated Draft EIR/EIS. Detailed discussions of each impact and the specific locations where each impact is identified are presented in the following sections. The complete impact analysis from the January 2008 Sunrise Powerlink Draft EIR/EIS is presented in Appendix 1.

Table 2.4-2. Comparison of Impacts Identified – Land Use

Impact No.	Description	Impact Significance	
		Draft EIR/EIS	Recirculated Draft EIR/EIS
L-1	Construction would temporarily disturb land uses at or near the alignment		
	Wind Project in Mexico, Transmission Line to U.S. Jacumba Substation	Class III	Class II, No Impact
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II
L-2	Presence of a project component would divide an established community or disrupt land uses at or near the alignment		
	Wind Project in Mexico, Transmission Line to U.S. Jacumba Substation	No Impact	Class II, No Impact
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class I, Class II, No Impact

Significance Criteria. The criteria used to assess the significance of land use impacts resulting from the Sempra Presidential Permit and related facilities are the same as the significance criteria for the Sunrise Powerlink. NEPA provides no specific thresholds of significance for the assessment of project impacts on land use. The following land use significance criteria were derived from previous environmental impact assessments and from Appendix G of the CEQA Guidelines (Environmental Checklist Form, Section IX).

- The Proposed Project would conflict with applicable land use plans, policies, or regulations of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating environmental effects.⁵
- The Proposed Project would divide an established community or disrupt an existing or recently approved land use.

⁵ This conflict criterion is not considered in the Land Use section. Rather, Appendix 2 presents a Policy Screening Report, in which plans and policies are evaluated for their relevance to the Proposed Project and alternatives. Analysis of consistency with plans and policies is presented in Section D.16. Discussion and analysis of proposed amendments to plans is provided in Section D.17. Therefore, discussion of this significance criterion has been addressed fully in those parts of the EIR/EIS.

For purposes of this analysis, a construction-related (temporary) land use impact would occur if access to a use would temporarily be disrupted or if the nature, condition, or operation of a use would temporarily be altered during construction of the Proposed Project or alternative. An operational (permanent) land use impact would occur if a physical division between related land uses would result from the Proposed Project, or if access to a use would permanently be disrupted or if the nature, condition, or operation of a use would permanently be altered as a result of the Proposed Project operation.

Construction Impacts

Impact L-1: Construction would temporarily disturb land uses at or near the alignment (No Impact, Class II)

Sempra RWEPP (Mexico) (Class II). The RWEPP would be constructed on approximately 7,500 acres north of the town of La Rumorosa. Sensitive land uses within the RWEPP properties and surrounding areas include open spaces, recreational use, and Highway Mexico 2. The town of La Rumorosa is less than 1,000 feet from the border of RWEPP. Additional rural residences occur north of the town of La Rumorosa within the RWEPP site, however because of the limited number of residences within the site itself, and the large acreage of the site, it is assumed that the wind turbines would not be located immediately adjacent to the residences. Sensitive land uses adjacent to the RWEPP property include BLM Wilderness lands in the U.S. Implementation of Mitigation Measure L-1a will reduce construction-related land use impacts to less than significant levels (Class II).

Construction of the RWEPP would create noise and dust as a result of heavy construction equipment operating on temporary and permanent access roads, and moving building materials to and from construction staging areas. This would result in temporary disturbances to those rural residential and limited public and commercial facilities detailed above. Mitigation measures to reduce noise and air quality impacts are presented in Sections 2.8 and 2.11, respectively, but these measures would not eliminate the disturbance. While this disturbance would be short-term and temporary at any one location, it would be significant if construction is not carefully managed and residents are not kept informed. Implementation of Mitigation Measure L-1a will ensure that construction-related land use impacts would be less than significant (Class II).

Sempra Baja Wind Transmission Line (Mexico to U.S.) (No Impact). Approximately 3 miles of transmission line would run from the Jacumba Substation to the RWEPP north of La Rumorosa, Mexico. There are no residences or other sensitive land uses within 1,000 feet of the Sempra 230 or 500 kV transmission line.

SDG&E Jacumba Substation (No Impact). The Jacumba Substation would be constructed on vacant land that is located immediately south of the existing SWPL ROW in a sparsely developed area. The land surrounding the substation site is vacant and undeveloped land. The closest structures to the new substation, a truck stop and gas station, are approximately 2,100 feet away, therefore there would be no impact on sensitive land uses.

SDG&E 69 kV Transmission Line (Class II). This route would traverse land used for agriculture, commercial, parks and recreation/open space, public facilities and utilities, and residential uses. Sensitive land uses in the area include residential uses. Other land uses that could be potentially impacted by construction activities include commercial uses. Refer to Sections 2.5, Wilderness and Recreation, and 2.6, Agricultural Resources, for an analysis of construction-related impacts to wilderness and recreation and agricultural resources, respectively, and Section 2.9, Transportation and Traffic, for construction-related impacts to roadways and railways.

Approximately 40 residences are located within 1,000 feet of the transmission line route. Construction of the transmission line would create temporary disturbance in these residential areas as a result of heavy construction equipment on temporary and permanent access roads and moving building materials to and from construction staging areas. Mitigation measures to reduce noise and air quality impacts are presented in Sections 2.8 and 2.11, respectively. However, these measures would not eliminate the disturbance. While this disturbance would be short-term and temporary at any one location, impacts would be significant if construction was not carefully managed and residents not kept informed. Implementation of Mitigation Measure L-1a will ensure that construction-related land use impacts would not be significant (Class II).

SDG&E Boulevard Substation Expansion (Class II). The Boulevard Substation Expansion would be constructed on SDG&E land and also on adjacent private land to be acquired by SDG&E. This land is occupied by one residence. The construction would occur adjacent to land used for public roadways, and adjacent to residential uses. Refer to Sections 2.5, Wilderness and Recreation, and 2.6, Agricultural Resources, for analysis of construction-related impacts to wilderness and recreation and agricultural resources, respectively, and Section 2.9, Transportation and Traffic, for construction-related impacts to public roadways and railways.

Approximately 9 residences are within 1,000 feet of the Boulevard Substation. Construction of the substation would create temporary disturbance in these residential areas within 1,000 feet as a result of heavy construction equipment on temporary and permanent access roads and moving building materials to and from construction staging areas. Mitigation measures to reduce noise and air quality impacts are presented in Sections 2.8 and 2.11, respectively. However, these measures would not eliminate the disturbance. While this disturbance would be short-term and temporary at any one location, impacts would be significant if construction was not carefully managed and residents not kept informed. As a result, Mitigation Measure L-1a, Prepare Construction Notification Plan, is recommended to reduce construction-related land use impacts to less than significant levels (Class II).

SDG&E Communication Tower (Class II). The White Star Communication Tower would be constructed on San Diego County land at the site of existing communication towers. SDG&E has an existing easement on the site of the proposed White Star Communication Tower. The construction would be ~~constructed~~ adjacent to land used for public roadways, utilities, and rural residences. Two residences are located approximately 1,000 feet of the White Star Communication Tower. Construction of the new communication tower, including the demolition of the two existing wooden communication tower, would create temporary disturbance in these residential areas as a result of heavy construction equipment on temporary and permanent access roads and moving building materials to and from construction staging areas. Mitigation measures to reduce noise and air quality impacts are presented in Sections 2.8 and 2.11, respectively. These measures would not eliminate the disturbance. While this disturbance would be short-term and temporary, impacts would be significant if construction was not carefully managed and residents not kept informed. Implementation of Mitigation Measure L-1a, Prepare Construction Notification Plan, will reduce construction-related land use impacts to less than significant levels (Class II).

The full text of Mitigation Measure L-1a is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact L-1: Construction would temporarily disturb the land uses it traverses or adjacent land uses

L-1a Prepare Construction Notification Plan.

Operational Impacts

Impact L-2: Presence of a project component would divide an established community or disrupt land uses at or near the alignment (No Impact, Class II, Class I)

Sempra RWEPP (Mexico) (No Impact). The proposed wind project facilities would be constructed on land that will be leased from two communities, the ejido Jácume and Cordillera Molina. The land to be leased is primarily vacant, open space. Although a few residences are located north of the town of La Rumorosa within the wind project site, the wind turbines would be sited such as to avoid these residences. The wind facilities would not constitute a physical division of these established communities because they would be located north of the community of La Rumorosa between the community and the U.S.-Mexico border. The wind farm would not establish a permanent barrier or obstacle between uses such that a perceived physical division would occur. While wind towers and lines would be present, travel or connections within the community would not be impeded so as to create a divide. As such, no land use impacts relating to the division of an established community would occur within the RWEPP (No Impact), and no mitigation would be required.

Sempra Baja Wind Transmission Line (Mexico to U.S.) and SDG&E Jacumba Substation (No Impact). The Jacumba Substation and Baja Wind Transmission would be constructed on unoccupied open space. No other uses would be impacted by presence of the substation and transmission line. Neither the Jacumba Substation and Baja Wind Transmission would divide an established community because they would be built in undeveloped areas. As such, no land use impacts relating to the division of an established community would occur within the Jacumba Substation or along the Baja Wind Transmission (No Impact), and no mitigation would be required. Refer to Section 2.3, Visual Resources, for a discussion of issues relating to the degradation of character and quality of the substation area and surroundings.

SDG&E 69 kV Transmission Line (Class II). The alternative would traverse land used for agriculture, recreation/open space, public facilities and utilities, and residential uses. Sensitive land uses in the area are residential uses. Refer to Sections 2.5 and 2.6 for an analysis of operational impacts to wilderness and recreation and agricultural resources, respectively. In addition, Section 2.9, Transportation and Traffic, includes operational impacts to public roadways and railways and Section 2.8 Noise, provides a discussion of noise impacts.

The 69 kV transmission route would not physically divide these established uses but would traverse between and border them. The new transmission facilities would not constitute a physical division of an established community. The route would generally follow property boundaries, and would not bisect them. In addition, the transmission line would not establish a permanent barrier or obstacle between uses such that a perceived physical division would occur. While towers and lines would be present, travel or connections within the community would not be impeded so as to create a divide. As such, no land use impacts relating to the division of an established community would occur, and no mitigation would be required.

Rural residential uses along the alternative route were identified under Impact L-1. From an operational perspective, presence of the transmission line and associated facilities would not disrupt actual use of residential properties or structures. Access to all uses would be fully restored once construction of the alternative is complete. The alternative would not remove any residences or cause any residential use to change. However, pending future development could be affected (see discussion below).

Future Planned Uses. The 69 kV transmission line would be located adjacent to the existing SWPL, and would traverse the proposed Ketchum Ranch residential development between approximately MP BL-3.3 and BL-3.45. Mitigation Measure L-1b requires SDG&E to coordinate with landowners to revise the route, where feasible, to minimize land use conflicts between the transmission line and existing/planned development. Potential solutions for these projects are presented in the mitigation measure. To reduce impacts to planned new land uses identified at the time of analysis or subsequent to project approval by CPUC and BLM, it may be feasible to make minor adjustments to alignment location or tower design that would accommodate the proposed development without compromising the transmission line or creating new impacts to adjacent land uses that would be more adverse than the approved alignment.

Preparation and implementation of a construction notification plan (Mitigation Measure L-1a) would serve to notify landowners and tenants of pending construction. However, this notification would not provide sufficient time to investigate mitigation rerouting of the transmission line at specific parcels. Implementation of Mitigation Measure L-2b would reduce potential effects on the Ketchum Ranch development. The impact to this development would be significant if the mitigation cannot be effectively implemented. In the case of Ketchum Ranch, it is expected that revisions to the transmission line developed under Mitigation L-2b would reduce impacts to less than significant levels (Class II) because the housing project is still in design phases and design has incorporated a parkway where the SWPL passes through the property. As examples, implementation of this measure could include narrowing of the ROW in the development area, or collocating the 69 kV lines on the 500 kV towers.

SDG&E Boulevard Substation Expansion (Class I). The Boulevard Substation Expansion would be constructed on land currently owned by SDG&E and also potentially on one private residence, located at the intersection of Old Highway 80 and Tule Jim Lane, purchased for these purposes. The Boulevard Substation Expansion may require the demolition of the residence. However, the landowner would be compensated based on the fair market value of the property. The purchase and removal of a single home by the project would result in a loss of a residential dwelling unit (Class I). No mitigation is available to reduce these impacts to a less than significant level; however, Mitigation Measures L-1a (Prepare Construction Notification Plan), L-1d (Provide advance notice and appoint public affairs officer), and L-1e (Notify property owners and provide access) are required to reduce the severity of impacts.

SDG&E Communication Tower (No Impact). The White Star Communication Tower would be constructed on the site of an existing communication tower land currently owned by the San Diego County. SDG&E has an existing easement on the site of the proposed White Star Communication Tower. The White Star Communication Tower would not divide an established community because it would occur at an existing communication tower site. Refer to Section 2.3, Visual Resources, for a discussion of issues relating to the degradation of character and quality of the communication tower area and surroundings. As such, no land use impacts relating to the division of an established community would occur within the SDG&E Communication Tower site, and no mitigation would be required.

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measure for Impact L-2: Presence of a transmission line or substation would divide an established community or disrupt land uses at or near the alignment

- L-1a** Prepare Construction Notification Plan.
- L-1d** Provide advance notice and appoint public affairs officer [APM LU-2]
- L-1e** Notify property owners and provide access. [APM LU-4]
- L-2b** Revise project elements to minimize land use conflicts.

2.5 Wilderness and Recreation

2.5.1 Environmental Setting – Wilderness and Recreation

Sempra RWEF (Mexico). The RWEF wind project and related facilities would be located north of the town of La Rumorosa, in the municipality of Tecate. This region is primarily natural and has a very low population density. There are no Mexican Federal wilderness areas, wilderness study areas, nor official recreation areas in this region. However, the area of La Rumorosa, adjacent to the wind project facilities, is visited frequently, especially during the summer months, for ecotourism by national tourists. Rock climbing and rappelling is common in the La Rumorosa region. Additionally, the RWEF would be visible from the south end of Anza-Borrego Desert State Park (ABDSP), the BLM Table Mountain Area of Critical Environmental Concern (ACEC), the BLM Jacumba Wilderness and the Blue Angel's Peak in Imperial County.

Sempra Baja Wind Transmission Line (Mexico to U.S.). A new 230 or 500 kV transmission line would be required to connect the RWEF to the existing 500 kV SWPL at the Jacumba Substation. Approximately one mile of new 230 or 500 kV transmission line would be sited on private land within the United States and approximately two miles of 230 or 500 kV transmission line would be sited in Mexico. There are no State or Federal wilderness areas or recreation areas within or immediately adjacent to the proposed ROW. The nearest wilderness areas are the Jacumba Wilderness a 31,237-acre federal wilderness area administered by BLM (BLM, 2007a) in Imperial County approximately one mile east of the transmission ROW, and the BLM Table Mountain ACEC approximately 0.45 miles north west of the substation site. The Jacumba Wilderness allows hunting, fishing, horseback riding and camping. Blue Angel's Peak, approximately 1 mile from the proposed transmission ROW, is the tallest peak in Imperial County and used for recreation hikes. The transmission line would be visible from the Jacumba Wilderness and from Blue Angel's Peak.

The 230 or 500 kV transmission line in Mexico would be located approximately 2 miles north of the town of La Rumorosa, in the municipality of Tecate. As described for the wind project, this region is primarily natural but there are no designated wilderness or recreation areas. However, the area and the surrounding region is visited frequently for ecotourism and by national tourists from Mexicali, especially during the summer.

SDG&E Jacumba Substation. There are no State or Federal wilderness areas or wilderness study areas within or immediately adjacent to the Jacumba Substation site. The nearest wilderness areas are the Jacumba Wilderness approximately 1.2 miles east of the substation site, and the Table Mountain BLM ACEC approximately 0.45 miles northwest of the substation site. The southern end of ABDSP is approximately 1.5 miles north of the substation site. The Jacumba Wilderness allows hunting, fishing, horseback riding and camping. The Jacumba Substation would be visible from the Jacumba Wilderness and from Table Mountain.

SDG&E 69 kV Transmission Line. The 69 kV transmission line would not cross any State or Federal wilderness or recreational areas. The line would run approximately 0.45 miles south of the Table Mountain ACEC, and would be located approximately 1.5 miles south of ABDSP. The transmission line would traverse two parcels that the Nature Conservancy purchased in January, 2008 with the intent to sell to the ABDSP. The new parcels, and therefore the 69 kV transmission line, would fall within the Nature Conservancy's cross-border project, the Las Californias Binational Conservation Initiative. It would traverse BLM land from MP BL-0.5 to shortly before MP BL-2. The 69 kV transmission line would cross approximately 1,800 feet north of the Lakeside Sportsman Club.

SDG&E Boulevard Substation Expansion. The Boulevard Substation has no nearby wilderness or recreational uses so recreation impacts from the expansion are not addressed and wilderness and recreation impacts from the Boulevard Substation will not be discussed further.

SDG&E Communication Facility. The White Star Communication Tower would be built at an existing communication towers site is owned by the San Diego County. It is surrounded by residences, utilities, and public roads. Existing access roads would be used during construction. The White Star Communication Tower would not cross any wilderness area, Wilderness Study Areas, or any recreation areas. Therefore, wilderness and recreation impacts from the White Star Communication Tower will not be discussed further.

2.5.2 Environmental Impacts and Mitigation Measures – Wilderness and Recreation

Like the RWD Project and Jacumba Substation analyzed in the Draft EIR/EIS, wilderness and recreation impacts of the RWEF and the required transmission, substation, and communication components would result in one significant, unmitigable (Class I) impacts. However, the project components associated with the RWEF would require mitigation for two additional impacts to be less than significant, compared with the RWD Project and Jacumba Substation which required mitigation for only one additional impact to be less than significant. Additionally, the number of wilderness and recreational areas affected by the RWEF and required components are greater than those affected by the RWD Project and Jacumba Substation.

Table 2.5-1 shows the level of significance of each wilderness and recreation impact for the Sempra RWEF and associated components. This table compares the significance of each wilderness and recreation impact as identified in the January 2008 Sunrise Powerlink Draft EIR/EIS, and as identified in this recirculated Draft EIR/EIS. Detailed discussions of each impact and the specific locations where each impact is identified are presented in the following sections. The complete impact analysis from the January 2008 Sunrise Powerlink Draft EIR/EIS is presented in Appendix 1.

Table 2.5-1. Comparison of Impacts Identified – Wilderness and Recreation

Impact No.	Description	Impact Significance	
		Draft EIR/EIS	Recirculated Draft EIR/EIS
WR-1	Construction activities would temporarily reduce access and visitation to recreation or wilderness areas		
	Wind Project in Mexico, Transmission Line to U.S.	Class II	Class II, Class III
	Jacumba Substation	No Impact	Class III
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	No Impact
WR-2	Presence of a transmission line or substation would change the character of a recreation area, diminishing its recreational value		
	Wind Project in Mexico, Transmission Line to U.S.	Class I, Class III	Class I, Class III
	Jacumba Substation	No Impact	Class II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	No Impact

Table 2.5-1. Comparison of Impacts Identified – Wilderness and Recreation

WR-3	Presence of a transmission line or wind project facilities would permanently preclude recreational activities		
	Wind Project in Mexico, Transmission Line to U.S.	No Impact, Class III	Class II
	Jacumba Substation	No Impact	No Impact
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	No Impact

Significance Criteria. The criteria used to assess the significance of wilderness and recreation impacts resulting from the Sempra Presidential Permit and related facilities are the same as the significance criteria for the Sunrise Powerlink. The criteria take into account the magnitude (e.g., scale, frequency, duration), direction of change (e.g., positive/negative), and the reversibility (e.g., temporary/permanent) of the impact in consideration of the sensitive receptors in the study area. Impacts to wilderness and recreation would be significant if:

- The Proposed Project or alternatives would directly or indirectly disrupt activities in established federal, State, or local recreation areas and/or wilderness areas.
- The Proposed Project or alternatives would substantially reduce the scenic, biological, cultural, geologic, or other important factors that contribute to the value of federal, State, local, or private recreational facilities or wilderness areas.

Construction Impacts

Impact WR-1: Construction activities would temporarily reduce access and visitation to recreation or wilderness areas (No Impact, Class II, Class III)

Sempra RWEF (Mexico) (Class II). Construction of the RWEF in Mexico would involve the use of local roads for construction vehicle access given the limited roadways in the area. Widening of these roadways may be necessary to accommodate construction vehicle sizes and necessary turnarounds. While there is no officially designated wilderness or recreation area, the town of La Rumorosa does receive a large number of tourists, especially during the summer months (Tecate Government, 2007). The location of construction equipment along roadways may temporarily preclude or constrain recreational access to this region.

The noise, dust, and presence of heavy equipment associated with project construction may temporarily reduce visitation to the La Rumorosa area. Recreationists may cancel or schedule their visits to avoid construction periods thereby resulting in temporarily reduced visitation. Similarly, visitor use of the areas to be traversed or bordered by the transmission line and wind project could be affected. Construction-related disturbances to recreational resources would result in significant impacts. Mitigation Measures WR-LR1a (Coordinate construction schedule and activities with the authorized officer for the recreation area) and WR-LR1c (Coordinate with local agencies to identify alternative recreation areas) are recommended to reduce impacts to less than significant levels (Class II).

Sempra Baja Wind Transmission Line (Mexico to U.S.) (Class III). The construction of the three-mile transmission line is expected to take several months. Because of the short duration of the transmission line construction, the isolated nature of tower construction (towers are spaced at every 1,300 feet and construction activities move from one site to another), and the distance between the transmission line and the nearest wilderness/recreation site, construction disturbance to recreationists is expected to be less than significant (Class III). Mitigation would not be required.

SDG&E Jacumba Substation (Class III). The noise and presence of heavy equipment associated with project construction would likely be noticeable from several recreation areas. However, the nearest recreational area, the Table Mountain ACEC, is approximately 0.45 miles away. Construction noise and dust would be noticeable but would be reduced because of the distance from the construction to the nearest recreational area to less than significant and no mitigation is required (Class III).

SDG&E 69 kV Transmission Line (Jacumba Substation to Boulevard Substation) (No Impact). The 69 kV transmission line would cross no wilderness or recreation areas.

[The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measures for Impact WR-1: Construction activities would temporarily reduce access and visitation to recreation or wilderness areas

WR-LR1a Coordinate construction schedule and activities with the authorized officer for the recreation area.

WR-LR1c Coordinate with local agencies to identify alternative recreation areas.

Operational Impacts

Impact WR-4 (Presence of a transmission line in a designated wilderness or wilderness study area would result in loss of wilderness land) would not occur because there are no designated wilderness areas within the Jacumba Substation site, along the transmission line route, or in the La Rumorosa area.

Impact WR-2: Presence of a transmission line or substation would change the character of a recreation area, diminishing its recreational value (Class I, II)

Sempra RWEP (Mexico) (Class I). The RWEP would be located adjacent to the Jacumba Wilderness along the U.S.-Mexico border, and less than 1,000 feet north of the town of La Rumorosa in Mexico. At full buildout, the RWEP wind project footprint could cover 7,500 acres, converting land from a primarily natural appearance to a generally industrial appearance. While this region receives a large number of national tourists, especially during the summer months, it is not officially designated as a recreation area by the Mexican government (Tecate Government, 2007.).

The turbines would be visible at locations within the Sierra Juárez Mountains and from the Jacumba Wilderness. Views of the wind tower/turbines from these recreational areas would be from distance of approximately one to ten miles or greater. Since these recreational areas are valued for their solitude and expansive scenic setting, presence of wind turbines would be contrary to the expectations of many recreationists in these areas.

The RWEP would not be collocated with any existing industrial type structures, and would therefore introduce new industrial features to a predominantly natural landscape. As described in Section 2.3, Visual Resources, long-term, operational visual impacts would be experienced by viewers within and outside of the area. Additionally, the noise from the wind turbines would substantially elevate the ambient noise levels by more than 5 dBA within 500 feet of the edge of the wind turbine project area in the natural areas along the project sites (Contra Costa County, 2007). Refer to Section 2.8 for additional information on RWEP noise impacts.

The La Rumorosa area would permanently change as a result of development of the large wind project. This impact cannot be mitigated to a less than significant level (Class I). Implementation of Mitigation Measures V-3a (Reduce visual contrast of towers and conductors) would reduce these impacts.

Sempra Baja Wind Transmission Line (Mexico to U.S.) (Class II). The 230 or 500 kV transmission line would connect the Jacumba Substation in the U.S. to the RWEP wind project in Mexico. The one mile of transmission line in the United States would be located approximately 1.2 miles from the nearest wilderness and recreation area. The transmission line in Mexico would traverse primarily natural area, approximately 0.5 miles east of the wind project. The mountainous region north of La Rumorosa is used for recreational purposes by international and national tourists. However, the transmission line would only minimally enter into the mountainous region, staying east of the mountains. It would, however, likely be visible from the mountainous region used for recreation. This would be a significant impact. Implementation of Mitigation Measures V-3a (Reduce visual contrast of towers and conductors) would reduce this impact to a less than significant impact.

SDG&E Jacumba Substation (Class II). Although the substation may be visible from the Jacumba Wilderness, the presence or operation of the substation would not adversely affect these recreational resources. As described in Section 2.3, Visual Resources, the alternative substation site would be visible from the Jacumba Wilderness and from Table Mountain where open terrain and vast expanse of the desert mesa with relatively consistent visual character do not offer opportunities to either better screen the structures from view or blend them more effectively with a different background. Additionally, the transmission lines entering and exiting the substation would be visible from the hiking trails.

However, the existing 500 kV SWPL transmission line follows the northern and western boundaries of the Jacumba Wilderness and the southern boundary of Table Mountain. Therefore, the area surrounding the Jacumba wilderness area is already disturbed. The addition of developed industrial features (i.e., substation and transmission towers) would adversely alter the visual landscape in several areas within the wilderness but less so than if the area were undisturbed. Visibility of the Jacumba Substation would be contrary to the desired recreational experience. Mitigation Measure V-3a (Reduce visual contrast of towers and conductors), V-7a (Reduce visual contrast associated with ancillary facilities), and V-7b (Screen ancillary facilities), would reduce the impact to a less than significant level (Class II).

SDG&E 69 kV Transmission Line (No Impact). The 69 kV transmission line would be approximately 1.5 miles south of the ABDSP within the existing SWPL ROW and would run approximately 1,800 feet north of the Lakeside Sportsman Club, also while within the SWPL ROW. Because of the distance between the southern boundary of the ABDSP and the proposed 69 kV transmission line and because of the existing visual characteristic along the SWPL ROW, this would not change the character of a recreation area and no mitigation is required (No Impact).

[The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measure for Impact WR-2: Presence of the wind towers/turbines and associated facilities would change the character of a recreation area, diminishing its recreational value

- V-3a Reduce visual contrast of towers and conductors (second bullet of mitigation only applies).
- V-7a Reduce visual contrast associated with ancillary facilities.
- V-7b Screen ancillary facilities.

Impact WR-3: Presence of a transmission line or wind project facilities would permanently preclude recreational activities (Class II, No Impact)

Sempra RWEP (Mexico) (Class II). The RWD project would be located less than 1,000 feet north of the town of La Rumorosa, in the municipality of Tecate. While the RWD wind project is sited on approximately 6,250 to 21,250 acres, the actual wind project footprint would be approximately 312.5 to 2,125

acres. This region receives a large amount of national tourists, especially during the summer months; however, it is not officially designated as wilderness or recreation area by the Mexican government. (Tecate Government, 2007)

The specific location of the wind project facilities is not known at this time. If wind turbines and associated support structures were sited on or immediately adjacent to the trails or to petroglyphs within the region, recreationists would be precluded from these locations. Exact locations of wind project and support structures have not been determined. This impact analysis, therefore, conservatively assumes that structures would be sited on trails or near petroglyphs. Impacts to existing recreational resources that resulted from locating wind turbines on or immediately adjacent to the trail or near petroglyphs would be significant but mitigable to less than significant (Class II). Preclusion of the use of such recreational resources would be mitigated to a less than significant level through implementation of Mitigation Measure WR-LR3a (Coordinate tower and road locations with the authorized officer for the recreation area).

The full text of Mitigation Measure WR-LR3a is included in Appendix 12 of this EIR/EIS.

WR-LR3a Coordinate wind turbine and road locations with the authorized officer for the recreation area.

Sempra Baja Wind Transmission Line (Mexico to U.S.), SDG&E Jacumba Substation, and SDG&E 69 kV Transmission Line (No Impact). The Jacumba Substation and 230 or 500 kV transmission line would be located on private land in the United States and on land leased from the community of Jácume in Mexico. The 69 kV transmission line would be approximately 1.5 miles south of the ABDSP within the existing SWPL ROW would run approximately 1,800 feet north of the Lakeside Sportsman Club also within the SWPL ROW. These project components would not preclude recreational activities (No Impact) and no mitigation is required.

2.6 Agriculture

2.6.1 Environmental Setting – Agriculture

Sempra RWEPP (Mexico). There is very little agriculture in and around La Rumorosa due to its rocky soil and limited water resources. Mexico does not have DOC Farmlands or Williamson Act land designation. In addition, the land north of La Rumorosa is not classified as conservation farmland; it belongs to ejidos, or community farmers. Because of the poor soil and limited water, both the ejido Jacume and the ejido Cordillera Molina, the regions that have leased their territory to Sempra for the wind project, have used limited amounts of their acreage for farming. The land directly north and northwest of the town of La Rumorosa is classified by the Mexican government as not viable for agriculture, and viable only for goat grazing (INEGI, 2005). The land in and directly adjacent to the town of La Rumorosa can be used for mechanized farming and for grazing however it is classified as forest and thicket by the Mexican government (INEGI, 2005).

Sempra Baja Wind Transmission Line (Mexico to U.S.), SDG&E Jacumba Substation, SDG&E Boulevard Substation Expansion, and SDG&E Communication Facility. No DOC Farmlands, Active Agricultural Operations, or Williamson Act lands exist within or adjacent to the Jacumba Substation site, the 230/500 kV transmission line, the Boulevard Substation, or the White Star Communication Facility. As a result, neither these components would not temporarily or permanently impact Agricultural Resources. Therefore, agricultural impacts from these components will not be further discussed.

SDG&E 69 kV Transmission Line. The 69 kV Transmission Line would not traverse or be adjacent to any DOC Farmlands or Williamson Act lands. However, Active Agricultural Operations (organic salad crops, such as lettuce, cabbage, and kale forage crops) occur between BL-2.3 and -3.75 ~~and include those crops used to feed livestock, such as hay~~. The 69 kV line would also pass adjacent to field crops between BL-11.45 and -11.65 and between BL-11.9 and -12.1.

2.6.2 Environmental Impacts and Mitigation Measures – Agriculture

Like the RWD Project and Jacumba Substation analyzed in the Draft EIR/EIS, agriculture impacts of the RWEPP and the required transmission, substation, and communication components would not result in any significant, unmitigable (Class I) impacts. The project components associated with the RWEPP and the RWD Project and Jacumba Substation would require mitigation in order for impacts to be less than significant. The RWEPP shifts the agriculture impacts from near the town of Jácume to near the town of Jacumba.

Table 2.6-1 shows the level of significance of each agriculture impact for the Sempra RWEPP and associated components. This table compares the significance of each agriculture impact as identified in the January 2008 Sunrise Powerlink Draft EIR/EIS, and as identified in this recirculated Draft EIR/EIS. Detailed discussions of each impact and the specific locations where each impact is identified are presented in the following sections. The complete impact analysis from the January 2008 Sunrise Powerlink Draft EIR/EIS is presented in Appendix 1.

Table 2.6-1. Comparison of Impacts Identified – Agriculture

Impact No.	Description	Impact Significance	
		Draft EIR/EIS	Recirculated Draft EIR/EIS
AG-1	Construction activities would temporarily interfere with Active Agricultural Operations		
	Wind Project in Mexico, Transmission Line to U.S. Jacumba Substation	Class II	Class III, No Impact
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	No Impact	No Impact
		n/a	Class II, No Impact

Significance Criteria. The criteria used to assess the significance of agriculture impacts resulting from the Semptra Presidential Permit and related facilities are the same as the significance criteria for the Sunrise Powerlink. The following agriculture significance criteria were derived from previous environmental impact assessments and the CEQA Guidelines (Appendix G, Environmental Checklist Form). Impacts to agriculture would be significant if:

- The Proposed Project would convert more than 10 acres of DOC Farmland to non-agricultural use.
- The Proposed Project would involve other changes in the existing environment, which, due to their location or nature, could result in interference with agricultural operations.
- The Proposed Project would convert more than 10 acres of Williamson Act lands to non-agricultural use.

The conversion of DOC Farmland would be considered significant if more than 10 acres of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Significance, and/or Grazing Land are converted to non-agricultural use as a result of the Proposed Project. 'Interference with agricultural operations' refers to: (1) substantial direct loss of cultivated land (i.e., Active Agricultural Operations); and/or (2) substantial impacts relating to other issues. 'Substantial direct loss of cultivated land' refers to the loss of more than 10 acres of land under Active Agricultural Operations. 'Substantial impacts relating to other issues,' is defined to include effects that result in a permanent reduction in productivity or the ability to conduct pre-project operations (e.g., obstruction of and disturbance to agricultural land and operations, interference with aerial spraying applications, exposure of livestock to stray voltage and EMF, and avian perching near vineyards). The conversion of Williamson Act lands would be considered significant if greater than 10 acres of contract land or Agricultural Preserves are used for non-agricultural use.

The wind project components would not be located within lands with DOC designation or on Williamson Act lands, or their Mexican equivalent. Therefore, Impacts AG-2 (Operation would permanently convert DOC Farmland to non-agricultural) and AG-4 (Operation would permanently convert Williamson Act lands to non-agricultural use) would not occur. Because the wind project components would not result in a substantial direct loss of cultivated lands (i.e. more than 10 acres of land under Active Agriculture Operations), or result in a permanent reduction in productivity or the ability to conduct pre-project operations Impact AG-3 (Operation would permanently interfere with Active Agricultural Operations) would not occur.

Construction Impacts

Impact AG-1: Construction activities would temporarily interfere with Active Agricultural Operations (Class II, Class III)

Sempra RWEP (Mexico) (Class III). There is minimal agriculture north of the La Rumorosa region due to limited water availability and rocky soil. The agriculture that does occur is primarily subsistence farming and grazing. Existing agriculture is confined to the immediate vicinity of the town of La Rumorosa and the adjacent area. The wind project border would be approximately 1,000 feet north of the town of La Rumorosa. As such, impacts to agricultural lands would be adverse but less than significant. However, to ensure that residents of La Rumorosa are not unnecessarily impacted during construction, in compliance with NEPA, Mitigation Measures L-1d (Provide advance notice and appoint public affairs officer), L-1e (Notify property owners and provide access), L-1f (Flag ROW boundary and environmentally sensitive areas), are recommended. Please see the explanation of mitigation for less than significant impacts in Section D.1.4.1 of the January 2008 Draft EIR/EIS.

SDG&E 69 kV Transmission Line (Class II). ~~Forage~~ Organic salad crops are grown between BL-2.3 and -3.75 ~~and include crops used to feed livestock~~. These crops would be temporarily impacted by construction activities associated with the project, including construction or expansion of temporary or permanent access roads, use of conductor pulling sites; equipment and vehicle staging areas; and material storage and assembly sites. Construction activities could temporarily interfere with agricultural operations by damaging or removing crops or precluding planting; impeding access to certain fields or plots of land and obstructing farm vehicles and equipment; or disrupting drainage and irrigation systems (including self-propelled irrigation rigs), all of which could result in the temporary withdrawal of land from production, thereby reducing agricultural productivity on the affected land. Implementation of Mitigation Measures L-1d (Provide advance notice and appoint public affairs officer), L-1e (Notify property owners and provide access), L-1f (Flag ROW boundary and environmentally sensitive areas), AG-1a (Avoid interference with agricultural operations) and AG-1b (Restore compacted soil) would mitigate impacts to agricultural operations as a result of soil compaction to a less than significant level (Class II).

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact AG-1: Construction activities would temporarily interfere with Active Agricultural Operations

- L-1d** Provide advance notice and appoint public affairs officer. [APM LU-3]
- L-1e** Notify property owners and provide access. [APM LU-4]
- L-1f** Flag ROW boundary and environmentally sensitive areas. [APM LU-6]
- AG-1a** Avoid interference with agricultural operations.
- AG-1b** Restore compacted soil.

2.7 Cultural and Paleontological Resources

Cultural Resources

2.7.1 Environmental Setting – Cultural Resources

Sempra RWEF (Mexico). The RWEF would be located north of the town of La Rumorosa, in the Sierra de Juárez Mountains. The Baja California government website provides a general cultural history of the region (GobBC, 2007). The Baja California peninsula is believed to have been inhabited as early as 10,000-12,000 BC (Gamble et al., 2006). Like the United States Jacumba region, the La Rumorosa region is one of transition between the Sierra de Juárez and the Desierto del Colorado, or the Colorado Desert. Ethnographically, the La Rumorosa region was occupied by the Kumeyaay (often spelled Kumiai in Mexico). The lifeways of the Kumeyaay inhabitants at the time of European contact are presented in detail in Appendix 9A of the Draft EIR/EIS (January 2008).

For the purposes of Sunrise Powerlink analysis, it is estimated that the RWEF Wind Farm would occupy 7,500 acres north of the town of La Rumorosa. The official website of Baja California Secretary of Tourism (2008) highlights the Museum of Archeology at El Vallecito (sometimes identified as Vallecitos), located approximately 3 miles northwest from the town of La Rumorosa. The El Vallecito is an archaeoastronomy site, the only prehistoric archaeological site in the region designated as open to the public. It hosts prehistoric petroglyphs and pictographs at their original locations, midden soil, as well as lithic and ceramic artifacts. Archaeoastronomy is the study of how peoples in the past have understood the phenomena in the sky, how they used phenomena in the sky and what role the sky played in their cultures (Archaeoastronomy, 2008). This elaborate site with evidence of multiple activities has been described as occupying approximately 200 hectares (494 acres), and is indicative of the prehistoric occupation and culture of the region. While it is not certain that El Vallecito archaeological site would be within the RWEF Wind Farm area, the project appears to have the potential to impact this site. A formal records search at the Instituto Nacional de Antropología e Historia (INAH) in Mexicali would determine if this site is within the RWEF area, and if other known resources are present within the project area. Additional historic architectural resources exist in the area. One such structure is the “Casa de Piedra” or stone house, built 40 to 50 years ago. While the stone house is not officially recognized by the Mexican government as an architectural resource, it is recognized on the Tecate government website as a source of tourism (Tecate Government, 2007).”

Sempra Baja Wind Transmission Line (Mexico to U.S.) The Baja Wind Transmission Line is located in the San Diego Mountains, one mile would be located in the United States and approximately two miles of the line would be in Mexico. Prehistoric sites in the San Diego Mountains most frequently include bedrock milling features, and historic sites typically indicate ranching and mining activities; and the inland valleys, a transition zone between the mountains and coast with prehistoric sites bearing appropriate transitional evidence such as bedrock milling, lithic artifact scatters, and temporary camps and habitations, while historical sites contain evidence of settlement and ranching throughout the Mexican and American periods.

Sites exhibiting a broad range of past human activity have been identified within the nearby Interstate 8 Alternative. These include, but are not limited to, prehistoric artifact scatters, trails, temporary camps, habitation sites, quarries, and isolates, and historical roads, highways, railroads, refuse scatters, quarries, and walls. Two linear alternatives (A1 and A2) are proposed by Sempra to bring power from the RWEF in Mexico to the Jacumba. No survey was conducted for the transmission line connection; however, the CPUC team understands that cultural resources survey is being conducted for the project on behalf of the Applicant. Transmission line A1 has one cultural resource, an isolate (P-37-029406), within 150 feet

of its proposed centerline. Isolate P-37-029406 is not eligible for NRHP or CRHR inclusion, as isolates, typically defined as fewer than three artifacts, lack adequate context to retain data potential. Transmission line A2 also has one cultural resource, a ceramic scatter (CA-SDI-18817), within 150 feet of its proposed centerline; there is insufficient data regarding the NRHP- or CRHR-eligibility of this scatter.

SDG&E Jacumba Substation. The Jacumba Substation is located in the San Diego Mountains, whose prehistoric sites most frequently include bedrock milling features, and historic sites typically indicate ranching and mining activities; and the inland valleys, a transition zone between the mountains and coast with prehistoric sites bearing appropriate transitional evidence such as bedrock milling, lithic artifact scatters, and temporary camps and habitations, while historical sites contain evidence of settlement and ranching throughout the Mexican and American periods.

SWCA conducted a cultural resources records search for 100 percent of the Jacumba Substation and a 0.5-mile radius around the substation. No survey was conducted for this connected action to Sunrise Powerlink; however, the CPUC team understands that cultural resources survey is being conducted for the project on behalf of the Applicant. According to the preliminary cultural survey report, ten previously recorded cultural sites exist within the Jacumba Substation area of potential impact; however this analysis focuses on the cultural resource that would be directly affected by the Jacumba Substation construction (SDG&E, 2008b). One previously recorded cultural resource of unknown type (CA-SDI-2720, due to poor site record), has been identified in the eastern Jacumba Substation area and is subject to potential impacts (see Table 2.7-1).

The two proposed interconnect lines between the new Jacumba Substation and SWPL (also referred to collectively as the SWPL Loop In) have three cultural resources within 150 feet of their proposed centerlines (see Table 2.7-1): a roasting pit site (CA-SDI-6115), a ceramic scatter (CA-SDI-7083), and a lithic and ceramic scatter (CA-SDI-8307/8308). Each of these sites is potentially NRHP- or CRHR-eligible, but insufficient data are available at this time to make a determination.

SDG&E 69 kV Transmission Line. The 69 kV transmission line would connect the Jacumba Substation with the Boulevard Substation that is proposed for expansion. The 69 kV line generally is oriented east-west and would run south of and parallel to SWPL for much of its length, before turning north to reach the Boulevard Substation. Resources in the vicinity include prehistoric artifact scatters, trails, temporary camps, habitation sites, quarries, and isolates, and historical roads, highways, railroads, refuse scatters, and quarries. A total of 33 cultural resources have been identified within 150 feet of its proposed centerline (see Table 2.7-1). Of the 33 resources, two are recommended NRHP-eligible, one of which is also recommended eligible for CRHR, and a third site is presumed eligible.

- The 69 kV transmission line crosses the San Diego & Arizona Eastern Railroad, which, as a whole, has been recommended NRHP-eligible under Criteria A, C, and D by SWCA. Features and portions of this railroad outside the RWD transmission line alignment have been determined not eligible in the past; however, it is likely that other portions of this historically significant railroad remain NRHP- and CRHR-eligible.
- The 69 kV transmission line crosses the historical Old Highway 80. This former **intereontinental transcontinental** highway once called the “Broadway of America” has been designated as a County of San Diego “Historic Route.” **and has been nominated as a “State Historic Route.”** A 33-mile portion of the Old Highway 80 route has been recommended eligible for NRHP and CRHR under Criteria A and C, with specific contributing and non-contributing elements (Lortie, 2000). **It should also be noted that the remaining portions of Old Highway 80 in Imperial and San Diego Counties that are still in use were designated a “Historic U.S. Highway Route 80” in the California legislature. The assembly concurrent resolution 123 (ACR 123) was chaptered by the California Secretary of State**

on August 6, 2006. While ACR 123 designates Old Highway 80 as a historic route, it does not provide it protection from future planning or development. ACR 123 states that “the designation...shall have no impact upon the future planning or development of adjacent private and public properties...”

- Site CA-SDI-00176 is located within 150 feet of the proposed centerline of the 69 kV transmission line. This site was originally recorded by Treganza (1942), who noted evidence of cremations. Hector et al. (2006) updated the site using modern recording techniques and greatly expanded the site boundaries despite great evidence of disturbance. This 2006 survey did not relocate the cremations, but Hector et al. noted midden soil, a dense lithic scatter, bedrock milling, and a portable milling stone. Due to the size and variation of artifacts present within this habitation site, as well as the past evidence of cremations, this site is presumed eligible for NRHP and CRHR listing.

For the remaining 30 sites insufficient data are currently available for a determination; they are potentially eligible for NRHP or CRHR listing.

SDG&E Boulevard Substation Expansion. The Boulevard Substation Expansion would be located near the community of Boulevard, and would replace the current 0.25-acre substation with a 0.75-acre substation. No cultural resources have been identified within the proposed Boulevard Substation Expansion project area.

SDG&E Communication Facility. A cultural resources records search was conducted for the communication facility and no cultural resources were identified within the proposed White Star ~~and Los Pinos sites. The Los Pinos communication tower construction activities would use existing access roads and would include installing a 2-foot diameter dish on an already existing communication tower. Because of the use of existing access roads and because no new construction would occur, no impact to cultural resources are expected and cultural resources for the Los Pinos communication tower are not discussed further.~~

2.7.2 Environmental Impacts and Mitigation Measures – Cultural Resources

The RWEP and the required transmission, substation, and communication components would result in four significant, unmitigable (Class I) impacts as compared to the RWD Project and Jacumba Substation analyzed in the Draft EIR/EIS which would result in two significant, unmitigable (Class I) Impacts. Additionally a larger number of cultural resources would be impacted by the RWEP and related facilities than with the RWD Project and Jacumba Substation.

Table 2.7-1 shows the level of significance of each cultural impact for the Sempra RWEP and associated components. This table compares the significance of each cultural impact as identified in the January 2008 Sunrise Powerlink Draft EIR/EIS, and as identified in this recirculated Draft EIR/EIS. Detailed discussions of each impact and the specific locations where each impact is identified are presented in the following sections. The complete impact analysis from the January 2008 Sunrise Powerlink Draft EIR/EIS is presented in Appendix 1.

Table 2.7-1. Comparison of Impacts Identified – Cultural Resources

Impact No.	Description	Impact Significance	
		Draft EIR/EIS	Recirculated Draft EIR/EIS
C-1	Construction of the project would cause an adverse change to known historic properties		
	Wind Project in Mexico, Transmission Line to U.S.	Class II, No Available Data	Class I or Class II, Class II
	Jacumba Substation	Class II	Class II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class I or Class II
C-2	Construction of the project would cause an adverse change to sites known to contain human remains		
	Wind Project in Mexico, Transmission Line to U.S.	No Available Data, No Impact	Class I, No Impact
	Jacumba Substation	No Impact	No Impact
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class I, No Impact
C-3	Construction of the project would cause an adverse change to unknown significant buried prehistoric and historical archaeological sites or buried Native American human remains		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class I or II	Class I or II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class I or II
C-4	Construction of the project would cause an adverse change to Traditional Cultural Properties		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class I or II, No Available Data	Class I or II, No Available Data
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class I or II
C-5	Project operation and maintenance would cause an adverse change to known historic properties		
	Wind Project in Mexico, Transmission Line to U.S.	Class II, No Available Data	Class I or II
	Jacumba Substation	Class I or II	Class I or II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class I or II
C-6	Long-term presence of the project would cause an adverse change to known historic architectural (built environment) resources		
	Wind Project in Mexico, Transmission Line to U.S.	Class II	Class II, No Impact
	Jacumba Substation	No Impact	No Impact
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II, No Impact

Significance Criteria. The criteria used to assess the significance of cultural resource impacts resulting from the Semptra Presidential Permit and related facilities are the same as the significance criteria for the Sunrise Powerlink. Cultural resources are places or objects that are important for historical, scientific, and religious reasons and are of concern to cultures, communities, groups, or individuals. These resources may include buildings and architectural remains, archaeological sites and other artifacts that provide evidence of past human activity, human remains, or Traditional Cultural Properties.

In the context of a federally permitted undertaking the “significance” of cultural resources must be determined by the Federal Lead Agency under NEPA official in consultation with the SHPO and other interested parties. Any action, as part of an undertaking, that could affect a “significant” cultural resource is subject to review and comment under Section 106 of the NHPA of 1966. Cultural resources that retain integrity and meet one or more of the criteria of significance [36 CFR 60.6] qualify as significant and are eligible for listing on the NRHP; such resources must be managed in compliance with the Advisory Council’s regulations (36 CFR 800).

Within the State of California there are also provisions in CEQA, its Guidelines, and other provisions of the California Public Resources Code for the protection and preservation of significant cultural resources (i.e., “historical resources” and “unique archaeological resources”). The following significance criteria apply to cultural resources:

- The Proposed Project would cause an adverse effect (substantial adverse change) to the characteristics of a historic property or Traditional Cultural Property as defined by federal guidelines.
- The Proposed Project would cause a substantial adverse change in the significance of a historical resource or unique archaeological site as defined in 14 C.C.R. § 15064.5 and Cal. Pub. Res. Code § 21083.2.
- The Proposed Project could uncover, expose, and/or damage Native American human remains and associated artifacts.

Cultural resources that do not satisfy any of these criteria do not merit consideration under the NEPA, CEQA, or NHPA.

Although CEQA discusses impacts to “cultural and historical resources” and “unique archaeological sites,” the terms “*significant* cultural resource” and “historic property” frequently arise in the context of the NHPA and federal activities that may impact cultural resources. For expository ease, the term “historic property” is borrowed for purposes of the impacts discussion. However, it is understood to include “cultural and historical resources” and “unique archaeological sites,” and it does not impose any further requirements than those contained in CEQA.

Construction Impacts

There are 39 known cultural resources located within the Sempra Baja Wind Transmission Line, Jacumba Substation including the SWPL Loop-In, and 69 kV transmission line route. There are no known cultural resources located within the Boulevard Substation Expansion site (see Table 2.7-1). Two of the resources are recommended eligible for the NRHP, one of which is also recommended eligible for CRHR. A third resource is presumed eligible due to the recorded presence of cremations. Because known cultural resources that are potentially eligible for the NRHP or CRHR exist within areas of potential direct impact, as well as the potential for encountering undiscovered cultural resources, the following impacts could occur during project site testing, construction, or operation. One known cultural resource (El Vallecito) and other unidentified resources are likely present within the RWEP on the Mexican side of the border. There is also the potential to encounter undiscovered cultural resources during cultural resources survey and project construction.

Impact C-1: Construction of the project would cause an adverse change to known historic properties (Class I or II)

Sempra RWEP (Class I or II). The RWD wind farm and transmission line is located in Baja California, Mexico. No archaeological survey was performed for the area; however, the rich archaeological heritage of the area has been documented on both sides of the border. As such it is probable that known historic properties exist in this region and site survey is recommended before beginning construction of the RWEP. As discussed in Section D.7.9 in the Draft EIR/EIS (January 2008), should cultural resources be located during site survey or during project construction, most construction impacts would be mitigated to a level less than significant (Class II) by implementing Mitigation Measures C-1a, C-1b, C-1c, C-1d, C-1e, and C-1f. However, if the Vallecitos archaeoastronomy site would be adversely affected, such impacts would remain Class I.

Sempra Baja Wind Transmission Line (Class II). There are two known cultural resources located within 150 feet of the 1.7 miles RWEP area. Isolate P-37-029406 is located near transmission line A1 but not eligible for NRHP or CRHR inclusion, as isolates, typically defined as fewer than three artifacts, lack adequate context to retain data potential. Transmission line A2 has one cultural resource, a ceramic scatter (CA-SDI-18817), within 150 feet of its proposed centerline that is potentially eligible for NRHP or CRHR inclusion. There is also the potential to encounter undiscovered cultural resources during project construction. Based on the density of prehistoric and historic period resources in the vicinity, as well as the known occupation of the area, it is assumed that cultural resources would be encountered during a survey of the Baja Wind Transmission Line. Because known cultural resources that are potentially eligible for the NRHP or CRHR exist within areas of potential impact, as well as the potential for encountering undiscovered cultural resources, impacts could occur during project construction or operation. As discussed in Section D.7.9, adverse construction impacts would be mitigated to a level less than significant by implementing Mitigation Measures C-1a, C-1b, C-1c, C-1d, C-1e, and C-1f (Class II). However, if direct impacts to human remains cannot be avoided, project effects would be significant (Class I) even with mitigation.

SDG&E Jacumba Substation (Class II). One cultural resource that is potentially eligible for listing on the NRHP or CRHR is located within the Jacumba Substation region. Three additional resources are located within the substation's route for interconnection with SWPL. There is also the potential to encounter undiscovered cultural resources during survey or project construction. Based on the density of prehistoric and historic period resources in the vicinity, as well as the known occupation of the area, it is assumed that cultural resources would be encountered during a survey of the Jacumba Substation. Adverse construction impacts would be mitigated to a level less than significant (Class II) by implementing Mitigation Measures C-1a, C-1b, C-1c, C-1d, C-1e, and C-1f. However, if direct impacts to human remains cannot be avoided, project effects would be significant (Class I) even with mitigation.

SDG&E 69 kV Transmission Line (Class I or II). There are 33 known cultural resources located within 150 feet of the proposed 69 kV centerline. Two of the resources are recommended NRHP-eligible and a third is presumed eligible due the recorded presence of cremations (Treganza, 1943) and rock art (Hedges, 1979). There is also the potential to encounter undiscovered cultural resources during project construction. Because known cultural resources that are potentially eligible for the NRHP or CRHR exist within areas of potential impact, as well as the potential for encountering undiscovered cultural resources, impacts could occur during project construction or operation. As discussed in Section D.7.9, adverse construction impacts would be mitigated to a level less than significant by implementing Mitigation Measures C-1a, C-1b, C-1c, C-1d, C-1e, and C-1f (Class II). However, if direct impacts to human remains cannot be avoided, project effects would be significant (Class I) even with mitigation.

SDG&E Boulevard Substation Expansion and White Star Communication Facility (Class I or II).

No cultural resources have been identified within the proposed Boulevard Substation Expansion of White Star Communication Facility area. However, based on the density of prehistoric and historic period resources in the vicinity, as well as the known occupation of the area, it is assumed that cultural resources would be encountered during survey of the SDG&E Boulevard Substation Expansion and White Star Communication Facility. Because there is the potential for encountering undiscovered cultural resources, impacts could occur during project construction or operation. As discussed in Section D.7.9, in the Draft EIR/EIS (January 2008) adverse construction impacts would be mitigated to a level less than significant by implementing Mitigation Measures C-1a, C-1b, C-1c, C-1d, C-1e, and C-1f (Class II). However, if direct impacts to human remains cannot be avoided, project effects would be significant (Class I) even with mitigation.

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact C-1: Construction of the project would cause an adverse change to known historic properties

- C-1a** **Inventory and evaluate cultural resources in Final APE.**
- C-1b** **Avoid and protect potentially significant resources.**
- C-1c** **Develop and implement Historic Properties Treatment Plan.**
- C-1d** **Conduct data recovery to reduce adverse effects.**
- C-1e** **Monitor construction at known ESAs.**
- C-1f** **Train construction personnel.**

Impact C-2: Construction of the project would cause an adverse change to sites known to contain human remains (No Impact, Class I)

Sempra RWEP (Class I) The designation Native American does not exist in Mexico; however, there are many indigenous nations (*naciones o pueblos indigenos*) and persons of indigenous descent within Mexico and within Baja California specifically. As such, Impact C-2 (Construction of the project could cause an adverse change to sites known to contain Native American human remains) will be considered for Mexico as well.

The RWEP wind farm and transmission line are located in Baja California, Mexico. No archaeological records search or survey was performed for the area. However, there are known prehistoric sites in the vicinity of La Rumorosa including an archaeoastronomy site with pictographs and petroglyphs (El Vallecito). According to the Baja California Secretary of Tourism, the Archeological Museum at El Vallecito is located 3 miles northwest of La Rumorosa. The La Rumorosa area was ethnographically occupied by the Kumeyaay and related families of Kumeyaay still reside on both sides of the international border. As such there is potential that known human remains exist at the RWD wind farm site. Should human remains be discovered, work in the area of the discovery should be halted in that area and directed away from the discovery, but Mexican laws that may require specific actions are not known. It is assumed that cultural resources studies for the portion of the RWEP within Mexico would be coordinated with the Mexicali office of the *Instituto Nacional de Historia y Antropologia* (INAH) to ensure compliance with Mexican law.

Mitigation Measures C-1b, C-1c, C-1d, C-1e, C-1f, C-2a, and C-2b would partially compensate for impacts to human remains and would outline procedures for the treatment of unanticipated discoveries during construction and Mexican laws regarding such matter should be consulted. However, should human remains be discovered, the impacts would still be considered significant (Class I).

Sempra Baja Wind Transmission Line (No Impact). The RWEPP transmission alignment is not known to contain Native American human remains (Impact C-2); impacts to unknown human remains that may be discovered during surveys are addressed in Impact C-1 and discoveries of human remains during construction are addressed in Impact C-3.

SDG&E Jacumba Substation (No Impact). The Substation site is not known to contain Native American human remains (Impact C-2); impacts to unknown human remains that may be discovered during surveys are addressed in Impact C-1 and discoveries of human remains during construction are addressed in Impact C-3.

SDG&E 69 kV Transmission Line (Class I). There is one site (CA-SDI-00176) within 150 feet of the proposed 69 kV transmission centerline known to contain Native American human remains (Impact C-2). It is also possible that additional prehistoric archaeological sites identified during pre-construction surveys or discovered during the course of construction could contain human remains. Any adverse effect to human remains is considered significant (Class I).

SDG&E Boulevard Substation Expansion and White Star Communication Facility (No Impact). The Boulevard Substation expansion site and White Star Communication Facility are not known to contain Native American human remains (Impact C-2); impacts to unknown human remains that may be discovered during surveys are addressed in Impact C-1 and discoveries of human remains during construction are addressed in Impact C-3.

[The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measures for Impact C-2: Construction of the project would cause an adverse change to sites known to contain human remains

- C-1b** **Avoid and protect potentially significant resources.**
- C-1c** **Develop and implement Historic Properties Treatment Plan.**
- C-1d** **Conduct data recovery to reduce adverse effects.**
- C-1e** **Monitor construction at known ESAs.**
- C-1f** **Train construction personnel.**
- C-2a** **Properly treat human remains.**

Impact C-3: Construction of the project would cause an adverse change to unknown significant buried prehistoric and historical archaeological sites or buried Native American human remains (Class I or II)

All Components (Class I or II). Types of subsurface features that could be encountered within each of the RWEPP components include prehistoric resources such as buried living surfaces, artifact deposits, hearths, burials, and cremations. Historical resources that could be unearthed during project construction include refuse pits, privies, and structural foundations. Buried archaeological resources may be encountered during vegetation removal at tower and pull site locations, grading of access roads, or excavation associated with construction or undergrounding of power lines. Impacts to most unknown significant prehistoric and historical archaeological sites would be mitigated to a level that is less than significant (Class II) by implementing Mitigation Measures C-1c, C-1d, C-1f, C-2a and C-3a. However, effects related to Native American human remains would be significant (Class I) even with mitigation.

[The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measures for Impact C-3: Construction of the project would cause an adverse change to unknown significant buried prehistoric and historical archaeological sites or buried Native American human remains

- C-1c** **Develop and implement Historic Properties Treatment Plan.**
- C-1d** **Conduct data recovery to reduce adverse effects.**
- C-1f** **Train construction personnel.**
- C-2a** **Properly treat human remains.**
- C-3a** **Monitor construction in areas of high sensitivity for buried resources.**

Impact C-4: Construction of the project would cause an adverse change to Traditional Cultural Properties (Class I or II; No Available Data)

Sempra RWEP (No Data Available) Similar efforts shall be made for the RWEP area in Mexico as those described below for the United States. TCPs have been recorded by cultural resources practitioners in northern Baja (e.g., Gamble et al., 2006); however, it is unknown if any have been recorded in the vicinity of the RWEP area. Additionally, if the “El Vallecito” archaeological site is within the RWEP area, it may qualify as a TCP.

Sempra Baja Wind Transmission Line (Class I or II). To date, no TCPs have been identified within the RWEP area in the U.S. However, the Sacred Lands File search conducted for the transmission line noted that lands sacred to Native Americans are present in the vicinity of Jacumba, in undisclosed locations. The BLM, as the Federal Lead Agency under NEPA and Section 106 of the NHPA has initiated government-to-government consultation with appropriate Native American groups and notification to other public groups regarding project effects on traditional cultural values. That consultation will determine whether there are TCPs that could be affected within this segment. Though impacts to TCPs are often significant (Class I), mitigation, as defined by NEPA (in King, 2003), can include “minimizing impacts by limiting the degree or magnitude of the action...,” rectifying or reducing the impact, and/or “compensating for the impact by replacing or providing substitute resources or environments,” which when properly coordinated Native Americans or other Traditional Groups can reduce the impact to less than significant (Class II). Implementation of Mitigation Measure C-4a (Complete consultation with Native Americans and other Traditional Groups) could potentially reduce impacts to TCPs to a level that is less than significant (Class II); however, in some cases impacts may remain significant (Class I).

SDG&E Jacumba Substation (Class I or II). To date, no TCPs have been identified that would be directly impacted by the Jacumba Substation. However, Native American consultation has indicated that there are prehistoric rock art sites, springs, and sacred mountains in the vicinity of the substation. Additionally, the Sacred Lands File search conducted for the substation noted that lands sacred to Native Americans are present in the vicinity of the substation, in undisclosed locations. The BLM, as the Federal Lead Agency under NEPA and Section 106 of the NHPA, has initiated government-to-government consultation with appropriate Native American groups and notification to other public groups regarding project effects on traditional cultural values. That consultation will determine whether there are TCPs that could be affected within this segment. Though impacts to TCPs are often Class I, mitigation, as defined by NEPA (in King, 2003), can include “minimizing impacts by limiting the degree or magnitude of the action...,” rectifying or reducing the impact, and/or “compensating for the impact by replacing or providing substitute resources or environments,” which when properly coordinated with Native Americans or other Traditional Groups can potentially reduce the impact to Class II. Implementation of Mitigation Measure C-4a (Complete consultation with Native Americans and other Traditional Groups) could potentially reduce impacts to TCPs to a level that is less than significant (Class II), but in some cases impacts may remain significant (Class I).

SDG&E 69 kV Transmission Line (Class I or II). To date, no TCPs have been identified within the 69 kV project alignment. However, the Sacred Lands File search conducted for the transmission line noted that lands sacred to Native Americans are present in the vicinity of Jacumba, in undisclosed locations. The BLM, as the Federal Lead Agency under NEPA and Section 106 of the NHPA has initiated government-to-government consultation with appropriate Native American groups and notification to other public groups regarding project effects on traditional cultural values. That consultation will determine whether there are TCPs that could be affected within this segment. Though impacts to TCPs are often significant (Class I), mitigation, as defined by NEPA (in King, 2003), can include “minimizing impacts by limiting the degree or magnitude of the action...,” rectifying or reducing the impact, and/or “compensating for the impact by replacing or providing substitute resources or environments,” which when properly coordinated Native Americans or other Traditional Groups can reduce the impact to less than significant (Class II). Implementation of Mitigation Measure C-4a (Complete consultation with Native Americans and other Traditional Groups) could potentially reduce impacts to TCPs to a level that is less than significant (Class II); however, in some cases impacts may remain significant (Class I).

SDG&E Boulevard Substation Expansion and White Star Communication Facility (Class I or II). To date, no TCPs have been identified within the Boulevard Substation Expansion or White Star Communication Facility location. However, the Sacred Lands File search conducted for the substation and communication facility noted that lands sacred to Native Americans are present in the vicinity of the Sunrise Powerlink Interstate 8 Alternative, in undisclosed locations; the Interstate 8 Alternative passes near the Boulevard Substation. The BLM, as the Federal Lead Agency under NEPA and Section 106 of the NHPA has initiated government-to-government consultation with appropriate Native American groups and notification to other public groups regarding project effects on traditional cultural values. That consultation will determine whether there are TCPs that could be affected within this segment. Though impacts to TCPs are often significant (Class I), mitigation, as defined by NEPA (in King, 2003), can include “minimizing impacts by limiting the degree or magnitude of the action...,” rectifying or reducing the impact, and/or “compensating for the impact by replacing or providing substitute resources or environments,” which when properly coordinated Native Americans or other Traditional Groups can reduce the impact to less than significant (Class II). Implementation of Mitigation Measure C-4a (Complete consultation with Native Americans and other Traditional Groups) could potentially reduce impacts to TCPs to a level that is less than significant (Class II); however, in some cases impacts may remain significant (Class I).

[The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measure for Impact C-4: Construction of the project could cause an adverse change to Traditional Cultural Properties

C-4a Complete consultation with Native American and other Traditional Groups.

Operational Impacts

Impact C-5: Project operation and maintenance would cause an adverse change to known historic properties (Class I or II)

Sempra RWEF (Class I or II). The RWD wind farm and transmission line are located in Baja California, Mexico. No archaeological survey was performed for the area; however, based on the known site density to the north of the border as well as the site at El Vallecito, it is likely that prehistoric and historic period resources are present. Because it is probable that historic properties exist in this region, site survey is recommended before beginning construction of the RWEF project. Direct and indirect impacts may occur to known historic properties within and in the vicinity of the project area during

operation and long-term presence of the project. These impacts are potentially significant, but can be mitigated to a level that is less than significant (Class II) by implementing site protection measures and monitoring procedures, as detailed in Mitigation Measure C-5a (Protect and monitor NRHP- and/or CRHR-eligible properties), as well as implementation of Mitigation Measure C-4a (Complete consultation with Native Americans and other Traditional Groups). Impacts to human remains would remain significant (Class I), as would impacts to an archaeoastronomy rock art site such as El Vallecito.

Sempra Baja Wind Transmission Line (Class I or II). Direct and indirect impacts may occur to historic properties within and in the vicinity of the project area during operation and long-term presence of the project. There are two known cultural resources located within 150 feet of the U.S. portion of the Baja Wind Transmission centerline. Isolate P-37-029406 is located near transmission line A1 but not eligible for NRHP or CRHR inclusion, as isolates, typically defined as fewer than three artifacts, lack adequate context to retain data potential. Transmission line A2 has one cultural resource, a ceramic scatter (CA-SDI-18817), within 150 feet of its proposed centerline that is potentially eligible for NRHP or CRHR inclusion and potentially subject to long-term and operational impacts. Direct impacts could result from maintenance or repair activities, while increased erosion and access could result in indirect project impacts. These impacts are potentially significant, but can be mitigated to a level that is less than significant (Class II) by implementing site protection measures and monitoring procedures, as detailed in Mitigation Measure C-5a (Protect and monitor NRHP- and/or CRHR-eligible properties), as well as implementation of Mitigation Measure C-4a (Complete consultation with Native Americans and other Traditional Groups). Impacts to human remains would remain significant (Class I).

SDG&E Jacumba Substation (Class I or II). Direct and indirect impacts would occur to historic properties within and in the vicinity of the project area during operation and long-term presence of the project. There is one known resource that may be NRHP-eligible located within the Jacumba Substation and three more along the substations interconnection route to SWPL that are potentially subject to long-term and operational impacts. Direct impacts to these resources or other newly identified resources could result from maintenance or repair activities, while increased erosion could result as an indirect project impact. These impacts would be significant, but can be mitigated to a level that is less than significant (Class II) by implementing site protection measures and monitoring procedures, as detailed in Mitigation Measure C-5a (Protect and monitor NRHP- and/or CRHR-eligible properties), as well as implementation of Mitigation Measures C-2a (Properly treat human remains) and C-4a (Complete consultation with Native Americans and other Traditional Groups). Impacts to human remains would remain significant (Class I).

SDG&E 69 kV Transmission Line (Class I or II). Direct and indirect impacts would occur to historic properties within and in the vicinity of the project area during operation and long-term presence of the project. There are two resources recommended eligible for NRHP listing, another presumed eligible, and 30 additional known resources that may be NRHP-eligible located within the 69 kV transmission line that are potentially subject to long-term and operational impacts. Direct impacts to these resources or other newly identified resources could result from maintenance or repair activities, while increased erosion could result as an indirect project impact. These impacts would be significant, but can be mitigated to a level that is less than significant (Class II) by implementing site protection measures and monitoring procedures, as detailed in Mitigation Measure C-5a (Protect and monitor NRHP- and/or CRHR-eligible properties), as well as implementation of Mitigation Measures C-2a (Properly treat human remains) and C-4a (Complete consultation with Native Americans and other Traditional Groups). Impacts to human remains would remain significant (Class I).

SDG&E Boulevard Substation Expansion and White Star Communication Facility (Class I or II).

If cultural resources are identified during survey within the Boulevard Substation Expansion or White Star Communication Facility area, direct and indirect impacts would occur to historic properties within and in the vicinity of the project area during operation and long-term presence of the project. Direct impacts to any newly identified resources could result from maintenance or repair activities, while increased erosion could result as an indirect project impact. These impacts would be significant, but can be mitigated to a level that is less than significant (Class II) by implementing site protection measures and monitoring procedures, as detailed in Mitigation Measure C-5a (Protect and monitor NRHP- and/or CRHR-eligible properties), as well as implementation of Mitigation Measures C-2a (Properly treat human remains) and C-4a (Complete consultation with Native Americans and other Traditional Groups). Impacts to human remains would remain significant (Class I).

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact C-5: Project operation and maintenance would cause an adverse change to known historic properties

- C-1b** **Avoid and protect potentially significant resources.**
- C-1c** **Develop and implement Historic Properties Treatment Plan.**
- C-2a** **Properly treat human remains.**
- C-4a** **Complete consultation with Native American and other Traditional Groups.**
- C-5a** **Protect and monitor NRHP- and/or CRHR-eligible properties.**

Impact C-6: Long-term presence of the project would cause an adverse change to known historic architectural (built environment) resources (No Impact, Class II)

Sempra RWEPP (Class II). The presence of the wind turbines may result in indirect visual impacts to historic architectural resources. One such structure is the “Casa de Piedra” or stone house, built 40 to 50 years ago. While the stone house is not officially recognized by the Mexican government as an architectural resource, it is recognized on the Tecate government website as a source of tourism (Tecate Government, 2007). If the resource cannot be avoided, then screening this or other built environment resources from the project could minimize the visual impact. Similar resources are likely present and may also be subject to visual impacts. These impacts are potentially significant, but can be mitigated to a level that is less than significant (Class II) by implementing Mitigation Measure C-6a, which would reduce visual intrusions to historic built environment properties.

Sempra Baja Wind Transmission Line and SDG&E Jacumba Substation (No Impact). The Baja Wind Transmission Line and Jacumba Substation would create no impacts to historic architectural resources.

SDG&E 69 kV Transmission Line (Class II). The presence of the transmission line may result in indirect visual impacts to historic architectural resources. Indirect visual impacts to potentially NRHP- and/or CRHR-eligible built environment resources such as the Old Highway 80 and the San Diego & Arizona Eastern Railroad located within the project alignment should be avoided or minimized, where feasible. If the resources cannot be avoided, then screening these or other built environment resources from the project could minimize the visual impact. These impacts are potentially significant, but can be mitigated to a level that is less than significant (Class II) by implementing Mitigation Measure C-6a, which would reduce visual intrusions to historic built environment properties.

SDG&E Boulevard Substation Expansion and White Star Communication Facility (No Impact). Neither the Boulevard Substation Expansion nor the White Star Communication Facility would create impacts to historic architectural resources.

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measure for Impact C-6: Long-term presence of the project would cause an adverse change to known historic architectural (built environment) resources

C-6a Reduce adverse visual intrusions to historic built environment properties.

Table 2.7-2. Cultural Resources within the La Rumorosa Wind Energy Project Connected Action

Resource No.	Resource Type	National Register Status, Designations or Recommendations	Component and Comments
P-37-024023	Old Highway 80	Recommended Eligible	69kV Transmission Line; Historical segment of old U.S. 80, an early transcontinental highway.
P-37-025680	San Diego & Arizona Eastern Railroad	Recommended Eligible	69kV Transmission Line; Intact railroad segment.
P-37-029406	Isolate	Not Eligible	Sempra Baja Wind Transmission Line Route A1 - 500 kV; Tizon brown ware body sherds.
CA-SDI-176*	Habitation	Presumed Eligible	69 kV Transmission Line; midden, lithic scatter, bedrock milling. Treganza (1942) noted cremations. <u>Hedges (1979) noted rock art.</u>
CA-SDI-18817	Ceramic Scatter	Insufficient Data	Sempra Baja Wind Transmission Line Route A2 - 230 kV; Colorado buffware rim and body sherds.
CA-SDI-2720	Unknown	Insufficient Data	SDG&E Jacumba Substation; poor site record
CA-SDI-6115	Roasting Pits	Insufficient Data	SWPL Loop-In Transmission Line; Roasting pits and sherd scatters.
CA-SDI-7011	Multi-component	Insufficient Data	69 kV Transmission Line; Homestead site, flakes, pottery sherds, china with makers marks.
CA-SDI-7015	Railroad remains and historical refuse	Insufficient Data	69 kV Transmission Line; Historical railroad segment with associated refuse scatter.
CA-SDI-7018	Historical Refuse Scatter	Insufficient Data	69 kV Transmission Line; 18 ribbed powder cans, purple glass, square telephone pole, can with solder in bottom.
CA-SDI-7026	Lithic Scatter	Insufficient Data	69 kV Transmission Line; Cores, scrappers, and flakes.
CA-SDI-7027	Lithic Scatter	Insufficient Data	69 kV Transmission Line; Flakes (one with minimal utilization).
CA-SDI-7030	Multi-component	Insufficient Data	69 kV Transmission Line; Historical Refuse/Lithic Artifact Scatter
CA-SDI-7040	Lithic Scatter	Insufficient Data	69 kV Transmission Line; Flakes and core
CA-SDI-7051	Lithic Scatter	Insufficient Data	69 kV Transmission Line
CA-SDI-7053	Historical Refuse Scatter	Insufficient Data	69 kV Transmission Line
CA-SDI-7055	Lithic Scatter/Quarry	Insufficient Data	69 kV Transmission Line; Cobbles and flakes.
CA-SDI-7056	Lithic Scatter	Insufficient Data	69 kV Transmission Line; Flakes and cores.
CA-SDI-7059	Bedrock Milling / Lithic Scatter	Insufficient Data	69 kV Transmission Line
CA-SDI-7060	Temporary Camp	Insufficient Data	69 kV Transmission Line; Flakes, cores and sherds.
CA-SDI-7069	Lithic/Ceramic Scatter	Insufficient Data	69 kV Transmission Line; Porphyry, quartz, quartzite debitage, possible midden/fire affected rock.

Table 2.7-2. Cultural Resources within the La Rumorosa Wind Energy Project Connected Action

Resource No.	Resource Type	National Register Status, Designations or Recommendations	Component and Comments
CA-SDI-7072	Lithic Scatter	Insufficient Data	69 kV Transmission Line; Flake, hammerstone and cobble.
CA-SDI-7079	Lithic Scatter	Insufficient Data	69 kV Transmission Line; Utilized flakes and mano.
CA-SDI-7080	Historic Refuse	Insufficient Data	69 kV Transmission Line; Rusted tin cans with soldered bottoms and broken bottles.
CA-SDI-7083	Ceramic Scatter	Insufficient Data	SWPL Loop-In Transmission Line; Sherds.
CA-SDI-7085	Habitation	Insufficient Data	69 kV Transmission Line; Grinding slicks, utilized flakes, cores, tizon sherds, mano fragments, hammerstone, choppers, and scraper.
CA-SDI-7086	Ceramic / Lithic Scatter	Insufficient Data	69 kV Transmission Line; Tizon sherds, cores, flakes, scraper, and hammerstone.
CA-SDI-7951	Lithic Artifact Scatter	Insufficient Data	69 kV Transmission Line; Flakes, cores, and scrapers.
CA-SDI-8307/8308	Lithic/Ceramic Scatter	Insufficient Data	SWPL Loop-In Transmission Line; Scraper, flakes, biface, cores, and buffware sherds (8307 and 8308 reported as one site).
CA-SDI-8314	Lithic Scatter	Insufficient Data	69 kV Transmission Line; Flakes and hammerstone.
CA-SDI-8315	Lithic Scatter	Insufficient Data	69 kV Transmission Line; Flakes (one utilized).
CA-SDI-8316	Lithic/Ceramic Scatter	Insufficient Data	69 kV Transmission Line; Scraper, cobble, flakes (one utilized).
CA-SDI-8430	Lithic Scatter	Insufficient Data	69 kV Transmission Line; Flakes and cores.
CA-SDI-8431	Lithic Scatter	Insufficient Data	69 kV Transmission Line; Flakes and cores.
CA-SDI-8432	Temporary Camp	Insufficient Data	69 kV Transmission Line; Bedrock Milling / Ceramic / Lithic Scatter
CA-SDI-9156	Lithic Scatter	Insufficient Data	69 kV Transmission Line; Flakes.
CA-SDI-9157	Lithic Scatter	Insufficient Data	69 kV Transmission Line; Flakes.
CA-SDI-9278	Multi-component	Insufficient Data	69 kV Transmission Line; Historic well and corral, rock wall, obsidian awl, ceramic shards, metal wheel, tin can and wood.
CA-SDI-9279	Ceramic Scatter	Insufficient Data	69 kV Transmission Line; Tizon brown ware sherds.

* Site contains human remains

Paleontological Resources

2.7.3 Environmental Setting – Paleontological Resources

Sempra RWEP (Mexico). The area in the vicinity of the RWD site is underlain primarily by igneous and metamorphic rock representative of the following eras:

- **Paleozoic Era.** The Paleozoic era is represented by few sprinklings of metamorphic rock throughout the entire state of Baja California. These rocks are igneous and metamorphic. The two oldest findings have been in the northwest region of Baja California, and correspond to an olistolith located in between Tecate and the Guadalupe Valley.
- **Mesozoic Era.** The most significant event in this era was the development of volcanic-plutonic granite. During this era a large part of the Sierra mountains were formed, along with many metamorphic rocks. Less frequently, sedimentary rocks such as shale and sandstone were found in the regions near to the coast.

- **Cenozoic Era.** The rocks that were formed during this era are found through the state of Baja California and are primarily sedimentary and igneous rocks. This era was relatively calm, punctuated by occasional volcanic eruptions of a mixed composition.

SDG&E Baja Wind Transmission Line (Mexico to U.S.) and SDG&E Jacumba Substation. The Jacumba Substation and the Baja Wind Transmission are primarily underlain by quaternary alluvium. Quaternary alluvium consists of partly dissected, mostly unconsolidated, poorly sorted sand, silt, clay, and gravel located at the margins of canyons and within valley floors. “Younger” alluvium is Holocene (10,000 years ago to Recent) in age and “Older alluvium” is Pleistocene (1.8 million years ago to 10,000 years ago) in age. Fossil localities in older alluvium deposits throughout southern California have yielded terrestrial vertebrates such as mammoths, mastodons, ground sloths, dire wolves, short-faced bears, saber-toothed cats, horses, camels, and bison (Scott, 2006). Younger alluvium is determined to have a low potential for paleontological resources but is often underlain by older alluvium, which is determined to have a high potential for paleontological resources.

SDG&E 69 kV Transmission Line. The 69 kV transmission line is primarily underlain by quaternary alluvium (see above description of Jacumba Substation and the Baja Wind Transmission) and by granitic rocks. Granitic rocks are composed of quartz diorite (tonalite) with minor amounts of granodiorite and granite and are Cretaceous in age. Since granitic rocks are plutonic in origin, this geologic unit is determined to have no potential for paleontological resources.

SDG&E Boulevard Substation Expansion. The Boulevard Substation Expansion is primarily underlain by granitic rocks. Granitic rocks are composed of quartz diorite (tonalite) with minor amounts of granodiorite and granite and are Cretaceous in age. Since granitic rocks are plutonic in origin, this geologic unit is determined to have no potential for paleontological resources. Therefore, paleontological impacts from the Boulevard Substation Expansion will not be further discussed.

SDG&E Communication Tower. The White Star communication tower is primarily underlain by granitic rocks. Granitic rocks are composed of quartz diorite (tonalite) with minor amounts of granodiorite and granite and are Cretaceous in age. Since granitic rocks are plutonic in origin, this geologic unit is determined to have no potential for paleontological resources. Therefore, paleontological impacts from the White Star communication tower will not be further discussed.

2.7.4 Environmental Impacts and Mitigation Measures – Paleontological Resources

Like the RWD Project and Jacumba Substation analyzed in the Draft EIR/EIS, paleontological impacts of the RWEP and the required transmission, substation, and communication components would not result in any significant, unmitigable (Class I) impacts. The project components associated with the RWEP and the RWD Project and Jacumba Substation would require mitigation in order for impacts to be less than significant.

Table 2.7-3 shows the level of significance of each land use impact for the Sempra RWEP and associated components. This table compares the significance of each land use impact as identified in the January 2008 Sunrise Powerlink Draft EIR/EIS, and as identified in this recirculated Draft EIR/EIS. Detailed discussions of each impact and the specific locations where each impact is identified are presented in the following sections. The complete impact analysis from the January 2008 Sunrise Powerlink Draft EIR/EIS is presented in Appendix 1.

Table 2.7-3. Comparison of Impacts Identified – Paleontological Resources

Impact No.	Description	Impact Significance	
		Draft EIR/EIS	Recirculated Draft EIR/EIS
PAL-1	Construction of the project would destroy or disturb significant paleontological resources		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II	Class II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II

Significance Criteria. The criteria used to assess the significance of paleontological resource impacts resulting from the Sempra Presidential Permit and related facilities are the same as the significance criteria for the Sunrise Powerlink. The project will create a significant impact if it:

- Directly or indirectly disturbs or destroys a significant paleontological resource or site
- Is inconsistent with any Plan regarding paleontological resources

For purposes of the above significance criteria, examples of activities that could “directly” disturb or destroy paleontological resources include excavation, trenching, boring, tunneling or any other activity that disturbs the subsurface geologic formation. “Indirect” disturbances or destruction refers to activities where the disturbance or destruction of paleontological resources is reasonably foreseeable, such as where they lead to increased erosion, or unauthorized surface collection or subsurface excavation [i.e., workers onsite illegally take fossils, as indicated above].

A paleontological resource or site is considered “significant” where it meets any of the following criteria:

- It is the best example of its kind locally or regionally
- Illustrates a geologic principle
- Provides a critical piece of paleobiological data
- Encompasses any part of a “type locality” or a fossil or formation
- Contains a unique or particularly unusual assemblage of fossils
- Occupies a unique position stratigraphically
- Occupies a unique position, proximally, distally or laterally within a formation’s extent or distribution.

Impact PAL-1: Construction of the project would destroy or disturb significant paleontological resources (Class II)

There is potential that unknown paleontological resources exist in the area for all wind project components. These resources could be adversely affected by ground disturbance associated with construction activities. Any such impact would be considered significant, but would be reduced to a less than significant level (Class II) with implementation of Mitigation Measures PAL-1a through PAL-1e.

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact PAL-1: Construction of the project would destroy or disturb significant paleontological resources

- PAL-1a** Inventory and evaluate paleontological resources in the Final APE.
- PAL-1b** Develop Paleontological Monitoring and Treatment Plan.
- PAL-1c** Monitor construction for paleontology.
- PAL-1d** Conduct paleontological data recovery.
- PAL-1e** Train construction personnel.

2.8 Noise

2.8.1 Environmental Setting – Noise

Except for the Sempra RWEPP and the two miles of the Baja Wind Transmission Line in Mexico, the Presidential Permit components would be located in unincorporated San Diego County, where noise is regulated by San Diego County Code of Regulatory Ordinances Section 36.404, 36.410, and 36.414. Under Section 36.404 of this rule, average hourly noise in residential areas is limited to 50 to 55 dBA from 7 a.m. to 10 p.m., and to 45 to 50 dBA from 10 p.m. to 7 a.m. These limits effectively prohibit sources that cause more than 53 dBA CNEL on a day-night basis. These levels apply at or beyond six feet from the boundary of the easement for the transmission line.

Section 36.410 (Construction Equipment) prohibits construction equipment operation between the hours of 7 p.m. of any day and 7 a.m. of the following day, and limits daytime average construction noise levels to 75 dBA. This section also prohibits construction activities on Sundays and holidays.

Section 36.414 (General Noise Regulations) regulates general nuisance noise and defines schools, courts, churches, and hospitals as sensitive receptors.

Sempra RWEPP (Mexico). Generally low noise levels of ambient noise are expected to occur in the RWEPP area as the La Rumorosa region is rural. Rural areas or unpopulated lands are the quietest. Unpopulated natural areas are expected to be as low as 35 to 50 dBA, and ambient levels tend to be below 50 dBA in open areas. Near Highway Mexico 2 and the town of La Rumorosa noise levels are expected to be higher, between 60 and 70 dBA. Corona noise occurs along the existing Tijuana/Mexicali 230 kV transmission line, located adjacent to the southern border of the RWEPP. Noise generated by a 230 kV line is usually about 40 dBA at 40 feet from the outer conductor.

Noise-sensitive receptors within the RWEPP area include the town of La Rumorosa approximately 1,000 feet from the wind farm site, rural residences within the wind project site, and open space/recreational users within the La Rumorosa region. The setting is otherwise rural and natural without noise-sensitive uses. Wildlife that is sensitive to noise and the related impacts are discussed as part of Biological Resources (see Section 2.2).

Sempra Baja Wind Transmission Line (Mexico to U.S.). The 214 feet required for the 230 or 500 kV ROW would be located on private property in the San Diego County. Low ambient noise levels under 50 dBA generally occur on these lands that are mostly open space. Cars traveling along Old Highway 80 cause elevated noise levels.

No residences or otherwise noise-sensitive receptors are located within 1,000 feet of the new transmission ROW, which is in a rural and natural setting.

SDG&E Jacumba Substation. The 85-acre Jacumba Substation would be located on private property in the San Diego County. Low ambient noise levels under 50 dBA generally occur on these lands that are mostly open space. Cars traveling along Interstate 8 and Old Highway 80 also cause elevated noise levels.

No residences or otherwise noise-sensitive receptors are located within 1,000 feet of the new Jacumba Substation site, which is in a rural and natural setting.

SDG&E 69 kV Transmission Line. Varying ambient noise levels occur along the 69 kV transmission line. Rural communities or unpopulated lands along the 69 kV transmission line are the quietest, but noise is elevated in localized areas where influenced by on-road traffic (Interstate 8 and Old Highway 80) or sporadically by aircraft and railways. Natural noise levels absent human activity are generally low. Unpopulated natural areas are expected to be as low as 35 to 50 dBA, and ambient levels tend to be below 50 dBA in open areas. The first 3 miles of the transmission line route are within 1,600 to 2,000 feet of I-8 where noise levels are the highest (over 80 dBA). Additionally, the 69 kV transmission line would parallel to the existing 500 kV Southwest Powerlink transmission line for the first approximately 9.3 miles, along this line corona noise can be heard as a crackling or hissing sound at levels of approximately 50 dBA.

Noise sensitive receptors, including residences, occur near the 69 kV transmission route at multiple locations. Some residences are located along the route adjacent to the existing SWPL. Residences occur more frequently along the route near Boulevard. Approximately three residences are within 500 feet of the alternative 69 kV line where it parallels the existing SWPL transmission line, and approximately 20 residences are within 500 feet of the 69 kV line in the new ROW in Boulevard and in the intervening rural areas. Of these 20 residences 5 houses are less than 200 feet from the 69 kV ROW. Planned residential development within the Ketchum Ranch area could bring additional homes within 500 feet of the new route in the future.

Approximately 1.5 miles of the route occur on BLM land, which provides a rural and natural setting. Wildlife that is sensitive to noise and the related impacts are discussed as part of Biological Resources (see Section 2.2 Impacts B-7, B-8, and B-12). See Table 2.4-1, Land Use, for the land uses in the vicinity of this route.

SDG&E Boulevard Substation Expansion. Varying noise levels occur along the Boulevard Substation Expansion. Rural communities are quiet, but noise is elevated due to the proximity of Interstate 8 and Old Highway 80. The Boulevard Substation Expansion site is within 600 to 1,000 feet of Old Highway 80 and approximately 2,500 feet from the I-8 where noise levels are the highest (over 80 dBA). Based on its proximity to the rural highway, Old Highway 80, ambient noise levels around the Boulevard Substation Expansion site would potentially range between 50 to 60 dBA.

Approximately five residences (noise sensitive receptors) are within 500 feet of the Boulevard Substation Expansion site (three residences are within 300 feet). An additional five residences are within 1,000 feet of the Boulevard Substation.

SDG&E Communication Facility. Generally low noise levels are expected to occur in the White Star Communication Tower area as the region is rural. Rural areas or unpopulated lands are typically quiet areas. Unpopulated natural areas are expected to be as low as 35 to 50 dBA, and ambient levels tend to be below 50 dBA in open areas.

There are no residences within 500 feet of the White Star Communication Tower. The closest noise sensitive receptors are approximately 1,000 feet away.

2.8.2 Environmental Impacts and Mitigation Measures – Noise

Like the RWD Project and Jacumba Substation analyzed in the Draft EIR/EIS, noise impacts of the RWEP and the required transmission, substation, and communication components would result in two significant, unmitigable (Class I) impacts. Additionally the project components associated with the RWEP would have two significant but mitigable (Class II) impacts, compared with the RWD Project and Jacumba Substation which would have one significant but mitigable impact.

Table 2.8-1 shows the level of significance of each noise impact for the Sempra RWEPP and associated components. This table compares the significance of each noise impact as identified in the January 2008 Sunrise Powerlink Draft EIR/EIS, and as identified in this recirculated Draft EIR/EIS. Detailed discussions of each impact and the specific locations where each impact is identified are presented in the following sections. The complete impact analysis from the January 2008 Sunrise Powerlink Draft EIR/EIS is presented in Appendix 1.

Table 2.8-1. Comparison of Impacts Identified – Noise

Impact No.	Description	Impact Significance	
		Draft EIR/EIS	Recirculated Draft EIR/EIS
N-1	Construction noise would substantially disturb sensitive receptors and violate local rules, standards, and/or ordinances		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class I, Class III	Class I, Class III
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class I, Class III
N-2	Construction activity would temporarily cause groundborne vibration		
	Wind Project in Mexico, Transmission Line to U.S.	Class II	Class II, Class III
	Jacumba Substation	No Impact	Class III
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II, Class III
N-3	Operational noise levels would increase due to corona noise from operation of the transmission lines and other project components		
	Wind Project in Mexico, Transmission Line to U.S.	Class III	Class II, No Impact
	Jacumba Substation	Class III	Class III
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class III, No Impact
N-4	Routine inspection and maintenance activities would increase ambient noise levels		
	Wind Project in Mexico, Transmission Line to U.S.	Class I, Class III	Class I, No Impact
	Jacumba Substation	Class III	Class III
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class I, Class III

Significance Criteria. The criteria used to assess the significance of noise impacts resulting from the Sempra Presidential Permit and related facilities are the same as the significance criteria for the Sunrise Powerlink. Significance of noise or vibration impacts depends on whether the project would increase noise levels above the existing ambient levels by introducing new sources of noise. Noise impacts would be considered significant if:

- The Proposed Project would conflict with applicable noise restrictions or standards imposed by regulatory agencies.
- The Proposed Project would expose persons to or generate excessive groundborne vibration or groundborne noise levels.
- Operation of the Proposed Project would result in a substantial permanent increase in ambient noise levels (more than five dBA) above levels existing without the project at sensitive receptor locations.
- The Proposed Project would result in a substantial temporary or periodic increase in ambient noise levels above levels existing without the project at sensitive receptor locations.

Use of Noise Thresholds. Given that environmental noise levels vary widely over time, a three dBA change is the minimum change in environmental noise that is perceptible and recognizable by the human ear. An increase in day-night environmental noise levels of more than 5 dBA (Ldn or CNEL) is considered to be a substantial increase and a significant impact. Intermittent noise sources are temporary or periodic, and they may also cause a significant impact over shorter durations if increases over 5 dBA could occur.

Use of Vibration Thresholds. No vibration-sensitive land uses (e.g., high-precision manufacturing facilities or research facilities with optical and electron microscopes) were identified during project area surveys. As such, the significance threshold for “excessive” groundborne vibration depends on whether a nuisance, annoyance, or physical damage to any structure could occur.

Construction Impacts

Impact N-1: Construction noise would substantially disturb sensitive receptors and violate local rules, standards, and/or ordinances (Class I, Class III)

Sempra RWEPP (Mexico) (Class I). Construction activities would be subject to Mexican national rules for the prevention and control of environmental contamination originating by the emission of noise (*Reglamento para la prevención y el control de la contaminación ambiental originada por la emisión de ruido*, or RPCCAR) which states that any public or private construction cannot violate the maximum level of noise emission established by the rules. If construction will be beyond the permitted noise level, the responsible party must submit the following information to the Secretary of Health and Assistance (*Secretaría de Salubridad y Asistencia*) fifteen days before the start date: Location and duration of the project; Number and types of noise emitting sources; Location of the noise sources during the duration of the project; and Hours of operation of the noise sources (RPCCAR, 1976).

Article 29 states that maximum allowable noise levels for vehicles are 79 dBA for vehicles weighing up to 3,000 kg, 81 dBA for vehicles weighing up to 10,000 kg, and 84 dBA for vehicles weighing more than 10,000 kg (RPCCAR, 1976).

Mexican law also regulates maximum permissible worker exposure to noise and vibration (*Relativo a las condiciones de seguridad e higiene en los centros de trabajo donde se genere ruido*) based on the international norm from the International Standards Organization (ISO-1999-1975) (Union, 2003).

Construction of the RWEPP would substantially increase ambient noise levels in the vicinity of the wind project and construction access routes both in Mexico and in the United States. Construction is expected to take up to five years to complete (from 2008 to 2013 according to the APP, 2007). This construction noise impact would be temporary. Construction noise would adversely affect nearby residences and recreational users of the open space areas around the town of La Rumorosa. There are no residences within 1,000 feet of the wind project in the United States, however the wind project is adjacent to the BLM Jacumba Wilderness and limited rural residences may occur at the wind farm site. Mitigation would need to be implemented including notification to residences and sensitive receptors, such as Mitigation Measures L-1a (Prepare construction notification plan) and N-1a (Implement Best Management Practices for construction noise). The measures would reduce the impact to the extent feasible, but the substantial noise increase from construction would be significant and unavoidable for nearby sensitive receptors (Class I).

Jacumba Substation and Baja Wind Transmission Line (Mexico to U.S.) (Class III). Construction of the Jacumba Substation and the 230 or 500 kV transmission line would substantially increase ambient noise levels through use of heavy machinery. However, this construction noise impact would be temporary, and there are no noise sensitive receptors within 1,000 feet of the transmission line route. Because no nearby noise-sensitive receptors would be affected, construction noise would not cause any impact (Class III), and no mitigation is required.

69 kV Transmission Line and Boulevard Substation Expansion (Class I). There are noise-sensitive receptors in close proximity to both of these components. Construction of the 69 kV transmission line and Boulevard Substation Expansion would temporarily substantially increase ambient noise levels in the vicinity of the line, in the substation area, and along all transport access routes, and it would result in construction noise impacts in the vicinity of residential uses. Construction noise would result in a significant impact by causing substantial noise increases at rural residences and other noise-sensitive uses. Mitigation Measure L-1a would be implemented (see Section D.4, Land Use). By establishing best management practices for activities likely to violate local noise standards, Mitigation Measure N-1a, in combination with the notification required by Mitigation Measure L-1a, would reduce this impact to the extent feasible, but at the residences closest to construction activities, the substantial noise increase during construction would be a significant and unavoidable impact (Class I).

SDG&E Communication Facility (Class III). Construction of the White Star Communication Tower would substantially increase ambient noise levels through use of heavy machinery. However, this construction noise impact would be temporary, and would not cause substantial noise increases at rural residences and other noise-sensitive uses as there are no residences within 1,000 feet of the transmission line route. Because no nearby noise-sensitive receptors would be affected, construction noise would not cause any impact (Class III), and no mitigation is required.

[The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measures for Impact N-1: Construction noise would substantially disturb sensitive receptors and violate local rules, standards, and/or ordinances

L-1a Prepare Construction Notification Plan.

N-1a Implement Best Management Practices for construction noise.

Impact N-2: Construction activity would temporarily cause groundborne vibration (Class II, Class III)

Semptra RWEP (Mexico) (Class II). Vibration levels from construction equipment and activities might be perceptible to receptors in the immediate vicinity of the construction sites due to the rocky terrain. Rock drilling and blasting would cause perceptible vibration in the immediate vicinity of construction sites. Perceptible vibration could be experienced by residents or workers inside structures within 50 feet of trucks traveling over uneven surfaces. The likelihood of a nuisance or annoyance occurring cannot be determined at this time as it would depend on the final turbine and access road siting. Potential physical damage to existing structures from rock drilling and blasting would be significant. With advance notification (Mitigation Measure L-1a) and a blasting plan that restores structures damaged by blasting, as in Mitigation Measure N-2a, the impacts from construction-related groundborne vibration would be adverse but not excessive, and this impact would be reduced to a less than significant level (Class II).

Jacumba Substation and Baja Wind Transmission Line (Mexico to U.S.) (Class III). Groundborne vibration would occur in the immediate vicinity of construction activities. Perceptible vibration could be experienced within 50 feet of trucks traveling over uneven surfaces or other ground disturbance. Rock drilling would be the activity to likely to cause excessive groundborne vibration, and the level of groundborne vibration that could reach sensitive receptors would depend on what equipment is used and the soil conditions surrounding the construction site. No vulnerable structures or sensitive receptors would be close enough to be affected. This impact would be less than significant (Class III).

69 kV Transmission Line and Boulevard Substation Expansion (Class II). A groundborne vibration impact would occur in the immediate vicinity of construction activities. Absent advance notification, a nuisance or annoyance could occur with perceptible vibration, but physical damage would not occur because no vulnerable structures would be close enough to the drilling. Blasting is not expected to be necessary for the 69 kV transmission line nor for the Boulevard Substation Expansion. The notification process suggested in Mitigation Measure L-1a would reduce the likelihood of a nuisance or annoyance occurring. With notification, the impacts from construction-related groundborne vibration would be adverse but not excessive, and this impact would be less than significant (Class II).

SDG&E Communication Facility (Class III). A groundborne vibration impact would occur in the immediate vicinity of the White Star construction site. Perceptible vibration could be experienced within 50 feet of trucks traveling over uneven surfaces or other ground disturbance. Demolition of the existing White Star Communication Tower would be the activity to likely to cause excessive groundborne vibration, and the level of groundborne vibration that could reach sensitive receptors would depend on what equipment is used and the soil conditions surrounding the construction site. No vulnerable structures or sensitive receptors would be close enough to be affected. This impact would be less than significant (Class III).

[The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measures for Impact N-2: Construction activity would temporarily cause groundborne vibration

- L-1a Prepare Construction Notification Plan.**
- N-2a Avoid blasting where damage to structures could occur.**

Operational Impacts

Impact N-3: Operational noise levels would increase due to corona noise from operation of the transmission lines and other project components (Class II, No Impact, Class III)

Sempra RWEPP (Mexico) (Class II). Noise would be created by the new wind turbine generators due to the rotation of the blades and operation of the generator. Wind turbine generator noise would be minimized through the use of current industry standard turbine technology. Generally, the three-blade upwind orientation and lower rotational speeds of new turbines create less noise than older turbine systems. The “upwind” configuration, i.e., the blades spin on the upwind side minimizes the low frequency noise by eliminating the wind shadow “thumping” and vibration caused by blades passing behind the tower, which was common on many older downwind machines. As sound spreads out from a noise source, the underlying physics of sound propagation determines that the sound will reduce by 6 dB for each doubling of distance away from the source. In arrangements of new wind turbines where a string of multiple turbines may be parallel with the lot line, a steady sound pressure level of 65 dBA is met at a distance of 170 feet from the property line (Contra Costa County, 2007).

In Mexico, noise regulations for fixed sources are 68 dBA from six in the morning to ten at night, and 65 dBA from ten at night until six in the morning (RPCCAR, 1976). Limited rural residences may occur at the wind farm site that may be exposed to noise levels over 65 dBA from the wind project operations, depending on orientation and proximity of residences to turbines. Operational noise from the wind turbines would cause a significant noise impact to the residences at the site. Mitigation Measure N-3b (Perform Operational Noise Study) would reduce the operational noise impact experienced by residences to a less than significant level (Class II).

SDG&E Jacumba Substation and Baja Wind Transmission Line (Mexico to U.S.) (No Impact).

The Jacumba Substation and the 230 or 500 kV transmission line would cause a permanent noise increase due to the corona effect. Audible power line noise would be generated from corona discharge, which is usually experienced as a random crackling or hissing sound. Corona noise from high voltage lines is at its greatest during wet weather or near inconsistencies or cuts in the metal surface of the line itself. The precise location of highest possible corona noise cannot be known until after commencing operation. This is because conductor surface defects, damage, and inconsistencies influence corona noise.

Noise-sensitive receptors are located further than 1,000 feet to the ROW edge of the transmission line and to the edge of the Jacumba Substation. For these locations, the increase caused by corona noise would be less than 5 dBA and compliant with the local standards. Therefore, there are no noise receptors that would experience a noise increase caused by corona noise.

69 kV Transmission Line (Class III). The first 9.3 miles of the 69 kV transmission line would be adjacent to the existing SWPL 500 kV transmission line. The corona noise of the SWPL is audible and dominant and the addition of a 69 kV line would not noticeably change the existing noise. The remaining approximate 4.2 miles of the 69 kV transmission line would be located in new ROW. Approximately 21 houses are within 500 feet of the ROW edge. Corona noise generated by the 69 kV line would likely be less than 40 dBA and barely audible at the right-of-way, and this minimal noise would diminish over distance. As such, the impact is considered adverse but less than significant (Class III).

SDG&E Boulevard Substation Expansion (Class III). The Boulevard Substation Expansion would introduce permanent noise sources such as transformers, reactors, circuit breakers, and other equipment that would be similar to but at higher levels than the already existing substation noise. The characteristic noise caused by the substation would be a low-frequency humming sound with occasionally louder impulse sounds during switching of a breaker. SDG&E would be required to achieve a maximum noise level of 45 dBA at the substation property line in accordance with noise regulations for unincorporated San Diego County, which could force SDG&E to install low-noise transformers. This level would comply with San Diego County standards. With existing noise levels in the vicinity of 50 dBA, the permanent increase in ambient noise from operation of the substation would not exceed 5 dBA at the nearest residence, and the substation would not cause a significant impact (Class III).

SDG&E Communication Facility (No Impact). The White Star Communication Tower operation would not introduce any additional permanent noise.

[The full text of Mitigation Measure N-3b is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measures for Impact N-3: Permanent noise levels would increase due to corona noise from operation of the transmission lines and noise from other project components

N-3b Perform Operational Noise Study.

Impact N-4: Routine inspection and maintenance activities would increase ambient noise levels (Class I, Class III, No Impact)

Sempra RWEP (Mexico) (Class I). Maintenance activities associated with the wind project towers/turbines and associated facilities would include primarily ground-level inspections and occasional helicopter use for repairs. Ground level inspections would involve vehicle travel to the turbine sites. As presented in the description for the RWEP, it is anticipated that maintenance access to the nacelle will be in the form of ladders inside the towers. Helicopters might be used for repairs involving heavy equipment. Light-duty helicopters would generate noise levels of under 80 dBA at 200 feet, and crew trucks

would cause levels of approximately 75 dBA at 50 feet. Access road repair may also involve occasionally increased noise from sources like a water truck or earthmoving equipment. These maintenance activities would periodically cause a substantial increase in existing noise levels at noise-sensitive receptors at the wind farm site, resulting in a noise impact that would be significant and unavoidable (Class I).

SDG&E Jacumba Substation and Sempra Baja Wind Transmission Line (Mexico to U.S.) (No Impact). Inspection and maintenance activities would include insulator washing and access road repair. These activities would involve occasional helicopter, truck, or earthmoving equipment activity along the transmission line ROW and within the substation. There are no noise sensitive receptors near these facilities, so no impact would occur.

SDG&E 69 kV Transmission Line and SDG&E Boulevard Substation Expansion (Class I). Inspection and maintenance, including occasional emergency repairs, of the 69 kV line and Boulevard Substation Expansion would result in substantial temporary periodic increases in noise levels above existing levels identical to transmission line construction. Inspection and maintenance noise would be intermittent over the life of the line. However, equipment within 200 feet of sensitive receptors would periodically cause a substantial increase in noise over conditions occurring without the 69 kV transmission line resulting in a significant impact. Because the need for emergency repairs cannot be predicted and advance notification or restricting the noise from work to daytime hours would not be practical, this would be a significant and unavoidable impact (Class I).

SDG&E Communication Facility (Class III). Inspection and maintenance of the White Star Communication Tower would involve occasional truck or other heavy equipment activity. This infrequent activity would not adversely affect any noise-sensitive receptors. This impact would be less than significant (Class III).

2.9 Transportation and Traffic

2.9.1 Environmental Setting – Transportation and Traffic

Sempra RWEPP (Mexico). The wind turbines and associated facilities would be sited in the vicinity of La Rumorosa, Baja California. While the exact siting of the project towers/turbines and associated facilities is not known, it is assumed that the local roadway network would be used for access to construction areas and the transportation of equipment and materials. Table 2.9-1 lists the roads that potentially could be impacted by the project. In addition to the two state highways, there are local unpaved roads that would be affected by the project at the site of the wind turbines.

Table 2.9-1. Public Roadways in the Vicinity of the RWEPP

Roadway	Classification	Existing Lanes	Traffic Volumes	
			Year	ADT
Highway Mexico 2 (toll)	Highway	4	NA	NA
Highway Mexico 2 (free)	Highway	4	NA	NA

NA = Not Available

SDG&E Jacumba Substation and Sempra Baja Wind Transmission Line (Mexico to U.S.). The Jacumba Substation and 230 or 500 kV transmission line would be sited on private property in San Diego County and on land leased from the ejidos Jácume and Cordillera Molina in Mexico. Table 2.9-2 lists the roads that could be impacted by the Jacumba Substation and the 230 or 500 kV transmission line. For many smaller or lightly traveled roads, the counties do not collect traffic data. As such, traffic data is unavailable for the roads traversed by and near the 1.7 miles of transmission line in the United States.

Table 2.9-2. Public Roadways Affected by the Jacumba Substation and Baja Wind Transmission Line

Roadway	Jurisdiction	Classification	Existing Lanes	Traffic Volumes	
				Year	ADT
Interstate 8	CALTRANS	Freeway	4	2005	27,000
Old Highway 80	San Diego County	Collector	2	ND	—
Carrizo Creek Road	San Diego County	None	2	ND	—
Local Roadways	Tecate	None	2	ND	—

SDG&E 69 kV Transmission Line. The 69 kV transmission line would be sited on private and federal property in San Diego County. Table 2.9-3 lists the roads that could be impacted by the 69 kV transmission line. For many smaller or lightly traveled roads, the counties do not collect traffic data. As such, traffic data is unavailable for many of the roads traversed by and near the 13.5 miles of transmission line.

Table 2.9-3. Public Roadways Near the 69 kV Transmission Line

Roadway	Jurisdiction	Classification	Existing Lanes	Traffic Volumes	
				Year	ADT
Interstate 8	CALTRANS	Freeway	4	2005	27,000
Old Highway 80	San Diego County	Collector	2	ND	—
Carrizo Creek Road	San Diego County	None	2	ND	—

Table 2.9-3. Public Roadways Near the 69 kV Transmission Line

Roadway	Jurisdiction	Classification	Existing Lanes	Traffic Volumes	
				Year	ADT
Carrizo Gorge Road	San Diego County	None	2	ND	—
Desert Rose Ranch Road	San Diego County	None	2	ND	—
Jewel Valley Road	San Diego County	None	2	ND	—
Tule Jim Road	San Diego County	None	2	ND	—
Eady Lane	San Diego County	None	2	ND	—

The 69 kV transmission line would cross the San Diego & Arizona Eastern Railway three times. The San Diego & Arizona Eastern Railway (SD&AE) is owned by the San Diego Metropolitan Transit System (MTS), and operates within San Diego County. This line connects with the Santa Fe Railway.

SDG&E Boulevard Substation Expansion. The Boulevard Substation Expansion would be constructed on SDG&E property and adjacent private property in Boulevard, San Diego County. Roads that would be impacted by the substation expansion include Tule Jim Road, Eady Lane, and Old Highway 80.

SDG&E Communication Facility. The White Star Communication Tower would be constructed on San Diego County property in Boulevard, San Diego County. SDG&E has an existing easement on the site of the proposed White Star Communication Tower. Roads that would be impacted by the White Star Communication Tower include Tierra Del Sol Road and Shasta Way.

2.9.2 Environmental Impacts and Mitigation Measures – Transportation and Traffic

The RWEPP and the required transmission, substation, and communication components would result in one new operational impact compared with the RWD Project and Jacumba Substation analyzed in the Draft EIR/EIS. Additional mitigation would ensure this new impact was less than significant.

Table 2.9-4 shows the level of significance of each traffic and transportation impact for the Sempra RWEPP and associated components. This table compares the significance of each traffic and transportation impact as identified in the January 2008 Sunrise Powerlink Draft EIR/EIS, and as identified in this recirculated Draft EIR/EIS. Detailed discussions of each impact and the specific locations where each impact is identified are presented in the following sections. The complete impact analysis from the January 2008 Sunrise Powerlink Draft EIR/EIS is presented in Appendix 1.

Table 2.9-4. Comparison of Impacts Identified – Transportation and Traffic

Impact No.	Description	Impact Significance	
		Draft EIR/EIS	Recirculated Draft EIR/EIS
T-1	Construction would cause temporary road and lane closures that would temporarily disrupt traffic flow		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II, No Impact	Class II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II

Table 2.9-4. Comparison of Impacts Identified – Transportation and Traffic

Impact No.	Description	Impact Significance	
		Draft EIR/EIS	Recirculated Draft EIR/EIS
T-2	Construction would temporarily disrupt the operation of emergency service providers		
	Wind Project in Mexico, Transmission Line to U.S.	Class II	Class II
	Jacumba Substation	No Impact	Class II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II
T-3	Construction would temporarily disrupt bus transit services		
	Wind Project in Mexico, Transmission Line to U.S.	Class II	Class II, No Impact
	Jacumba Substation	No Impact	No Impact
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II
T-4	Construction would temporarily disrupt pedestrian and/or bicycle movement and safety		
	Wind Project in Mexico, Transmission Line to U.S.	Class II, Class III	Class II
	Jacumba Substation	No Impact	Class III
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II
T-5	Construction vehicles and equipment would potentially cause physical damage to roads in the project area		
	Wind Project in Mexico, Transmission Line to U.S.	Class II	Class II
	Jacumba Substation	No Impact	Class II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II
T-6	Construction activities would cause a temporary disruption to rail traffic or operations		
	Wind Project in Mexico, Transmission Line to U.S.	Class II, No Impact	No Impact
	Jacumba Substation	No Impact	No Impact
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II, No Impact
T-8	Construction would conflict with planned transportation projects		
	Wind Project in Mexico, Transmission Line to U.S.	No Impact, No Available Data	Class III
	Jacumba Substation	No Impact	Class III
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class III
T-9	Construction would generate additional traffic on the regional and local roadways		
	Wind Project in Mexico, Transmission Line to U.S.	Class II	Class III
	Jacumba Substation	No Impact	Class III
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class III
T-11	Construction of the transmission lines would penetrate airport influence area		
	Wind Project in Mexico, Transmission Line to U.S.	n/a	Class II
	Jacumba Substation	n/a	No Impact
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II, No Impact

Significance Criteria. The criteria used to assess the significance of transportation and traffic impacts resulting from the Sempra Presidential Permit and related facilities are the same as the significance criteria for the Sunrise Powerlink. The significance criteria for transportation and traffic are based on the CEQA checklist in Appendix G of the CEQA Guidelines, a review of the environmental documentation for other utility projects in California, as well as on input from staff at the public agencies responsible for the transportation facilities. Transportation or traffic impacts would be significant if:

- The Proposed Project would require the temporary closure of a roadway, resulting in a temporary but substantial disruption to traffic flow and/or increased traffic congestion.
- Construction activities associated with the Proposed Project would restrict the movements of emergency vehicles (police cars, fire trucks, ambulances, and paramedic units) and there are no reasonable alternative access routes available.
- Increase in vehicle trips associated with construction worker commutes or equipment transportation associated with the Proposed Project would result in unstable flow, fluctuations in volumes of traffic which temporarily restrict flow or cause substantial drops in operating speeds that lead to an unacceptable reduction in level of service on any roadways along the project route, or as defined by each affected jurisdiction.
- Construction activities associated with the Proposed Project would substantially disrupt bus or rail transit service and there would be no suitable alternative routes or stops.
- Construction activities associated with the Proposed Project would result in a temporary but substantial disruption of rail traffic.
- Construction activities associated with the Proposed Project would impede pedestrian movements or bike trails and there are no suitable alternative pedestrian/bicycle access routes.
- Construction or staging activities associated with the Proposed Project would increase the demand for and/or reduce the supply of parking spaces and there would be no provisions for accommodating the resulting parking deficiencies.
- Construction activities associated with the Proposed Project would conflict with planned transportation projects in the project area.
- A noticeable increase in deterioration of roadway surfaces used for the Proposed Project's construction zone would occur as a result of heavy truck or construction equipment movements.
- A project structure, crane, or wires were to be positioned such that it could adversely affect aviation activities.

As the areas where the wind project and transmission line will be built are rural and not adjacent to local roads, Impact T-7, Construction would result in the short-term elimination of parking spaces, and Impact T-10, Underground construction could restrict access to properties and businesses, would not occur.

Construction Impacts

Impact T-1: Construction would cause temporary road and lane closures that would temporarily disrupt traffic flow (Class II)

Sempra RWEP (Mexico) (Class II). Construction of the wind tower/turbines and associated facilities could result in roadway closures at locations where the delivery of construction materials would require lane closures on public streets and highways. This would be a significant impact. These roadways would be used for equipment, material, and work crew transport to the construction sites. Mitigation Measure

T-1a, requiring the development of Detour Plans for any potential long-term lane closures would ensure that impacts are less than significant (Class II).

Substations in the U.S. and Transmission Lines (Class II). Construction equipment could cause temporary road and lane closures that could disrupt traffic flow on Old Highway 80, ~~and on Carrizo Creek Road, Carrizo Gorge Road, Jewel Valley Road, Tule Jim Road,~~ or other local highways in Mexico. To reduce impacts to a less than significant level (Class II), Mitigation Measure T-1b and Mitigation Measure T-1d ~~T-1a~~ would be required. ~~Together, a required encroachment permit and these~~ The mitigation requirements will ensure that impacts are less than significant.

SDG&E Communication Tower. Construction could cause temporary road and lane closures that could disrupt traffic flow on Tierra Del Sol Road and Shasta Way. To reduce impacts to a less than significant level (Class II), Mitigation Measure T-1b and Mitigation Measure T-1d ~~T-1a~~ would be required. ~~Together, a required encroachment permit and these~~ The mitigation requirements will ensure that impacts are less than significant.

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measure for Impact T-1: Construction would cause temporary road and lane closures that would temporarily disrupt traffic flow

~~**T-1a** Restrict lane closures. SDG&E shall restrict all necessary lane closures or obstructions on major roadways associated with overhead or underground construction activities to off peak periods in congested areas to reduce traffic delays. Lane closures must not occur between 6:00 and 9:30 a.m. and between 3:30 and 6:30 p.m., unless otherwise directed in writing by the responsible public agency issuing an encroachment permit.~~

T-1b Prepare detour plans. [T-APM-2b]

T-1d Prepare required permits. [T-APM-2a]

Impact T-2: Construction would temporarily disrupt the operation of emergency service providers (Class II)

All Components (Class II). Construction activity associated with the RWEPP facilities, associated substation, transmission lines, and the Boulevard Substation Expansion could interfere with emergency response by ambulance, fire, paramedic and police vehicles if roadways are blocked, lanes are closed or access to residences and businesses is restricted. Roadway segments that would be most impacted would be two-lane roadways (e.g., Old Highway 80) that provide one lane of travel per direction. Additionally, there is a possibility that emergency services would be needed at a location where access is temporarily blocked by the construction zone. Disruption of emergency service providers would be a significant impact without mitigation. Mitigation Measure T-2a, which requires advance coordination with emergency service providers in order to develop alternative routes and adjust service areas and destinations as necessary to maintain emergency service coverage and response times, would mitigate this impact to a less than significant level since emergency service providers would be aware of any potential delays, lane closures, and/or roadway closures prior to construction activities and would be able to maintain emergency service coverage (Class II).

The full text of Mitigation Measure T-2a is included in Appendix 12 of this EIR/EIS.

Mitigation Measure for Impact T-2: Construction would temporarily disrupt the operation of emergency service providers

T-2a **Coordinate with Emergency Service Providers.** [T-APM-4a]

Impact T-3: Construction would temporarily disrupt bus transit services (Class II, No Impact)

Sempra RWEPP (Mexico) (Class II). Local bus service, as well as local school bus routes could be impacted by the RWEPP. Construction activities could cause transit and school bus schedule delays if roadways need to be shut down for prolonged length of time, resulting in a significant impact. Implementation of Mitigation Measure T-3a requires consultation with the transit systems and affected school districts at least one month prior to construction to coordinate construction activities, and would ensure this impact is less than significant. This would mitigate this impact to a less than significant level because prior consultation with the bus and transit services would allow alternative routes and stops to be planned eliminating or reducing delays from construction (Class II).

SDG&E Jacumba Substation and Sempra Baja Wind Transmission Line (Mexico to U.S.) (No Impact). There are no bus services near the Jacumba Substation and 230 or 500 kV transmission line ROW as they are located on private land approximately 0.4 miles from a public roadway, therefore there would be no impact and no mitigation is required.

SDG&E 69 kV Transmission Line, SDG&E Boulevard Substation Expansion, and SDG&E Communication Tower (Class II). Local transit systems as well as local school bus routes could be impacted by the 69 kV transmission line, substation, and communication tower. Construction activities would cause transit and school bus schedule delays if roadways need to be shut down for a prolonged length of time. Implementation of Mitigation Measure T-3a requiring consultation with the transit systems and affected school districts at least one month prior to construction to coordinate construction activities would mitigate this impact to a less than significant level because prior consultation with the bus and transit services would allow alternative routes and stops to be planned eliminating or reducing delays from construction (Class II).

The full text of Mitigation Measure T-3a is included in Appendix 12 of this EIR/EIS.

Mitigation Measure for Impact T-3: Construction would temporarily disrupt bus transit services

T-3a **Consult with bus and transit services.** [T-APM-5a]

Impact T-4: Construction would temporarily disrupt pedestrian and/or bicycle movement and safety (No Impact, Class III, Class II)

Sempra RWEPP (Mexico) (Class II). Pedestrian and bicycle movement would be affected by construction activities if pedestrians and bicyclists are unable to pass through the construction zone or if established pedestrian and bicycle routes are blocked. This would be a significant impact (Class II). Mitigation Measures T-4 would reduce this impact to less than significant. These measures would ensure that safe alternative routes are designed either through or around the construction zone, facilitating safe passage.

SDG&E Jacumba Substation and Sempra Baja Wind Transmission Line (Mexico to U.S.) (No Impact). As the Jacumba Substation and the 230 or 500 kV transmission line are primarily located on private property, no impact to pedestrian and bicycle movement would occur.

Boulevard Substation Expansion and SDG&E Communication Tower. The Boulevard Substation Expansion and SDG&E communication tower would be build on private property and would use public roadways only as access roads. As such, less than significant impacts to pedestrian and bicycle movement are expected to occur and no mitigation is required (Class III).

69 kV Transmission Line, ~~Boulevard Substation Expansion, and SDG&E Communication Tower~~ (Class II). There are no designated bicycle lanes, bicycle routes and bikeways along the 69 kV transmission line, ~~nor near the substation and communication tower~~. However, bicyclists and pedestrians may use the local roadways for travel in the Boulevard area. Therefore, pedestrian and bicycle circulation would be significantly affected by transmission line construction activities if pedestrians and bicyclists were unable to pass through the construction zone (Class II). Impacts to pedestrian and bicycle circulation would be less than significant with the implementation of Mitigation Measures T-4a (Class II) because alternative pedestrian and bicycle routes would be established around the construction zone for safe passage as well as temporary detours for trail users for pedestrian and bicycles within the transmission line, ~~substation, and communication tower~~ region.

The full text of Mitigation Measure T-4a is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact T-4: Construction would temporarily disrupt pedestrian and/or bicycle movement and safety

T-4a Ensure pedestrian and bicycle circulation and safety.

Impact T-5: Construction vehicles and equipment would cause physical damage to roads in the project area (Class II)

All Components (Class II). Unexpected damage to roadways may occur from construction activities, construction vehicles, and transport of equipment along the roadways that would be used for construction of the RWEP wind project, associated transmission lines and substation, and from the Boulevard Substation Expansion. Construction activities causing increased wear on roadways would be considered a significant impact if this caused noticeable deterioration of roadway surfaces or other features in the road ROW (Class II). Mitigation Measure T-5a, which implements physical road improvements such as construction/modification of roadways and repaving roadways, would reduce this impact to less than significant.

The full text of Mitigation Measure T-5a is included in Appendix 12 of this EIR/EIS.

Mitigation Measure for Impact T-5: Construction vehicles and equipment would cause physical damage to roads in the project area

T-5a Repair damaged roads.

Impact T-6: Construction activities would cause a temporary disruption to rail traffic or operations (No Impact, Class II)

Sempra RWEP (Mexico), SDG&E Jacumba Substation, SDG&E Boulevard Substation, Sempra Baja Wind Transmission Line (Mexico to U.S.), and SDG&E Communication Tower (No Impact) These components of the RWEP and associated facilities would not affect rail operations.

SDG&E 69 kV Transmission Line (Class II). Transmission line construction activities would interfere with rail traffic because construction would require three crossings of the San Diego Railroad ROWs. This would be a significant impact (Class II). Mitigation Measure T-6a would require the applicant to obtain permits to enter the railroad ROWs. By complying with the railroad company permit requirements, the impact of transmission line construction on rail traffic operations would be less than significant.

The full text of Mitigation Measure T-6a is included in Appendix 12 of this EIR/EIS.

Mitigation Measure for Impact T-6: Construction activities would cause a temporary disruption to rail traffic or operations

T-6a Obtain railroad right-of-way permit. [T-APM-8a]

Impact T-8: Construction would conflict with planned transportation projects (No Data, No Impact)

Sempra RWEPP (Mexico) (Class III). There is no available data for any future transportation projects in the RWEPP area. Should there be any transportation projects, the public agencies having jurisdiction over Highway Mexico 2 or any local La Rumorosa roads would be notified of the project, and an encroachment permit or other such agreement must be obtained for each location where the project would interface with a roadway or other transportation facility. Public agencies that are responsible for the roadways in Tecate are the Department of Municipal Transportation (*Departamento de Transportes Municipales*), the Committee of Transportation (*Comité de Transportes*). Complying with local permits and agreements would ensure coordination between the applicant and affected agencies. Impacts would be less than significant, and no mitigation measures would be required, because coordination with appropriate agencies would address any issues prior to construction reducing any impacts (Class III).

SDG&E Jacumba Substation, Baja Wind Transmission Line (Mexico to U.S.), 69 kV Transmission Line, Boulevard Substation Expansion, and SDG&E Community Tower (Class III). A general search for planned transportation projects in the Jacumba and Boulevard area did not reveal any projects. Should there be any transportation projects, the public agencies having jurisdiction over the local roads would be notified of the project, and an encroachment permit or other such agreement must be obtained for each location where the project would interface with a roadway or other transportation facility. Public agencies that are responsible for the roadways in the Jacumba and Boulevard region include the County of San Diego and Caltrans. Complying with local permits and agreements would ensure coordination between the applicant and affected agencies. Impacts would be less than significant, and no mitigation measures would be required, because coordination with appropriate agencies would address any issues prior to construction reducing any impacts (Class III).

Impact T-9: Construction would generate additional traffic on the regional and local roadways (Class III)

All Components (Class III). Construction activities would result in a temporary increase of traffic on the regional and local roadways from construction worker commute trips, project equipment deliveries, and hauling materials to the project area. Impacts to the regional and local traffic would be significant if they lower the Level of Service (LOS), however it is not expected that construction generated additional traffic would decrease the LOS on roadways within the construction zone due to the remote location of the components. Construction of the Boulevard Substation Expansion would occur on an already existing site, therefore an increase of traffic would not be expected. As such, Impact T-9 would be adverse but less than significant and no mitigation is required (Class III).

Operational Impacts

Impact T-11: Construction of the transmission lines would penetrate airport influence area (No Impact, Class II)

Sempra RWEPP (Mexico) (Class II). The RWEPP would run along the U.S.-Mexico border for approximately 1.25 miles. While the wind towers would be located in Mexico, the towers could impact low flying aircraft (specifically the U.S. Customs and Border Patrol) if they were placed immediately adjacent to the border. The wind turbines would be approximately 300 feet tall, clustered, and bright white, and as such are visible to aircrafts in most weather conditions. While it is unlikely that any incident of an aircraft flying into a turbine would occur, turbines would present a substantial obstacle to be avoided, and require additional attention from pilots. Therefore, they would be a significant impact. Implementation of Mitigation Measure T-11b would ensure that border patrol staff would be notified of the project location and components in order to educate pilots to significant dangers that would exist as a result of development of the project (Class II); with mitigation, impacts would be less than significant (Class II).

SDG&E Baja Wind Transmission Line (Mexico to U.S.) (Class II). The Baja Wind Transmission Line would be approximately 3 miles long and would cross the U.S.-Mexico border which is patrolled by U.S. Customs and Border Patrol aircraft. According to SDG&E two incidents have occurred in the past involving aircraft flying into the existing SWPL transmission line.⁶ Both these incidents occurred shortly after the SWPL was built and since then SDG&E has worked to ensure such incidents do not occur again. While it is unlikely that any such incident would occur along the new Baja Wind Transmission Line, transmission lines and towers would present a substantial obstacle to be avoided, and require additional attention from pilots. Implementation of Mitigation Measure T-11b would ensure that border patrol staff would be notified of the project location and components in order to educate pilots to significant dangers that would exist as a result of development of the project; with mitigation, impacts would be less than significant (Class II).

Jacumba Substation, Boulevard Substation Expansion, SDG&E Communication Tower. (No Impact). Air traffic patterns would not be affected by the placement of new structures or power lines. The nearest airport to the components (the Jacumba Airport) is approximately three miles away.

SDG&E 69 kV Transmission Line (Class II). The 69 kV transmission line runs parallel to the existing SWPL transmission line for approximately 9.3 miles. According to SDG&E two incidents have occurred involving aircraft flying into the existing SWPL transmission line.⁷ Both these incidents occurred shortly after the SWPL was built and since then SDG&E has worked to ensure such incidents do not occur again. While it is unlikely that any such incident would occur, transmission lines and towers would present a substantial obstacle to be avoided, and require additional attention from pilots. Implementation of Mitigation Measure T-11b would ensure that border patrol staff would be notified of the project location and components in order to educate pilots to significant dangers that would exist as a result of development of the project; with mitigation, impacts would be less than significant (Class II).

⁶ "Performance Category Upgrade Request." SDG&E, December 19, 2007. http://www.wecc.biz/documents/meetings/PCC/2008/March/Sunrise_Powerlink_Double_Line_Outage_Final_Report.pdf Accessed March 2008.

⁷ "Performance Category Upgrade Request." SDG&E, December 19, 2007. http://www.wecc.biz/documents/meetings/PCC/2008/March/Sunrise_Powerlink_Double_Line_Outage_Final_Report.pdf Accessed March 2008.

Air traffic operations at Jacumba Airport would not be impacted by the 69 kV transmission line. The airport is approximately 5,500 feet south of the 69 kV transmission line, which would parallel the south side of the existing SWPL transmission line.

The full text of Mitigation Measure T-11b is included in Appendix 12 of this EIR/EIS.

Mitigation Measure for Impact T-11: Construction of the transmission lines would penetrate airport influence area

T-11b Consult with and inform U.S. Customs and Border Protection.

2.10 Public Health and Safety

2.10.1 Environmental Setting – Public Health and Safety

Sempra RWEPP (Mexico). The wind turbines and associated transmission lines would be sited near the town of La Rumorosa, Baja California. Research on general contamination in the Baja California region, and specifically in Tecate was conducted using the Tecate and Baja California websites, and the U.S.EPA documentation. No specific contaminated sites are known in this region. General water contamination is known to occur in La Rumorosa, especially during the summer months when the population of La Rumorosa doubles due to the influx of tourists from neighboring Mexicali. The infrastructure at La Rumorosa is unequipped to handle this surge of people (Tecate Government, 2007). In addition, general environmental problems have been documented all along the U.S.-Mexico border. These problems include: illegal dumping, agricultural drainage, airborne dust and pesticide exposure, inadequate water supplies, insufficient or nonexistent waste facilities and degradation of natural resources and ecosystems (EPA, 2007). Oftentimes, rural communities such as La Rumorosa or Jácume are at a greater risk as they may not have adequate water supply or waste treatment (EPA, 2007).

Baja Wind Transmission Line (Mexico to U.S.). The 230 or 500 kV transmission line would consist of one mile in the United States from the U.S.-Mexico border to the Jacumba Substation, and would include two miles of transmission line in Baja California in the region of La Rumorosa. A review of the EDR database search (EDR, 2007g) provided for the Interstate 8 Alternative for areas between MP I8-30 and MP I8-31 and a review of the GeoTracker website (RWQCB, 2008) did not identify any UST, LUST, or other hazardous material sites along the U.S. portion of the Baja Wind Transmission Line. Such database searches by third-party specialized contractors are often relied upon by agencies and others to identify known or potential sources of contamination. While the EDR database is not international, the EPA now includes some border contamination sites in its database and its Border 2012 Program focuses on environmental challenges along the U.S.-Mexico border region.

SDG&E Jacumba Substation. The Jacumba Substation would be sited on private land just west of the Imperial County line; the land is open and undeveloped. A review of the EDR database search (EDR, 2007g) provided for the Interstate 8 Alternative for areas between MP I8-30 and MP I8-31 and a review of the GeoTracker website (RWQCB, 2008) did not identify any UST, LUST, or other hazardous material sites within or near the substation site with the potential to impact the project.

69 kV Transmission Line. The 69 kV transmission line would follow the existing SWPL corridor for 9.3 miles then turn north for approximately 4 miles to reach the Boulevard Substation. Review of the EDR database survey (EDR, 2007g) completed for the Interstate 8 Alternative indicates there are two leaking fuel tanks in the town of Jacumba. A review of the GeoTracker website (RWQCB, 2008) did not identify any UST, LUST, or other hazardous material sites other than those discussed above.

Boulevard Substation Expansion. The Boulevard Substation Expansion would be constructed on SDG&E property and would potentially include additional private land west of the existing SDG&E property. This land is currently residential and used for the existing Boulevard Substation. A review of the GeoTracker website (RWQCB, 2008) did not identify any UST, LUST, or other hazardous material sites.

SDG&E Communication Facility. The White Star Communication Tower construction would be constructed on County of San Diego property currently used for a communication tower. [SDG&E has an existing easement on the site of the proposed White Star Communication Tower.](#) A review of the GeoTracker website (RWQCB, 2008) did not identify any UST, LUST, or other hazardous material sites.

2.10.2 Environmental Impacts and Mitigation Measures – Public Health and Safety

Like the RWD Project and Jacumba Substation analyzed in the Draft EIR/EIS, public health and safety impacts of the RWEP and the required transmission, substation, and communication components would not result in any significant, unmitigable (Class I) impacts. The impact significance for the RWEP and related facilities would be the same as those for the RWD Project and Jacumba Substation.

Table 2.10-1 shows the level of significance of each public health and safety impact for the Semptra RWEP and associated components. This table compares the significance of each public health and safety impact as identified in the January 2008 Sunrise Powerlink Draft EIR/EIS, and as identified in this recirculated Draft EIR/EIS. Detailed discussions of each impact and the specific locations where each impact is identified are presented in the following sections. The complete impact analysis from the January 2008 Sunrise Powerlink Draft EIR/EIS is presented in Appendix 1.

Table 2.10-1. Comparison of Impacts Identified – Public Health and Safety

Impact No.	Description	Impact Significance	
		Draft EIR/EIS	Recirculated Draft EIR/EIS
P-1	Soil or groundwater contamination could result from accidental spill or release of hazardous materials due to improper handling and or storage of hazardous materials during construction activities Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II	Class II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II
P-2	Residual pesticides and/or herbicides could be encountered during grading or excavation on currently or historically farmed land in agricultural areas		
	Wind Project in Mexico, Transmission Line to U.S. Jacumba Substation	Class II, No Impact No Impact	Class II No Impact
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II, No Impact
P-3	Previously unknown soil and/or groundwater contamination could be encountered during excavation or grading		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II, No Available Data	Class II, No Impact
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II
P-5	Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II	Class II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II

Table 2.10-1. Comparison of Impacts Identified – Public Health and Safety

Impact No.	Description	Impact Significance	
		Draft EIR/EIS	Recirculated Draft EIR/EIS
P-7	Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II	No Data Available
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	No Impact	No Impact
PS-1	Transmission line operation causes radio and television interference		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	n/a	Class II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	Class II	Class II
PS-2	Transmission line operation causes induced currents and shock hazards in joint use corridors		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	n/a	Class II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	Class II	Class II
PS-3	Electric fields can affect cardiac pacemakers		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	n/a	Class III
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	Class III	Class III
PS-4	Project structures would be affected by wind and earthquakes		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	n/a	Class III
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	Class III	Class III
PS-5	Transmission or substation facilities can suffer an outage		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	n/a	Class III
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	Class III	Class III

Significance Criteria. The criteria used to assess the significance of public health and safety impacts resulting from the Semptra Presidential Permit and related facilities are the same as the significance criteria for the Sunrise Powerlink. An impact would be considered significant if project construction or operation would:

- Result in soil contamination, including flammable or toxic gases, at levels exceeding federal, State, or local hazardous waste limits, including those established by Title 40, CFR, Part 261 and Title 22, CCRs, 66261.21, 66261.22, 66261.23, and 66261.24.
- Mobilize contaminants currently in the soil, which would result in exposure of humans and other sensitive receptors such as plants and wildlife to contaminant levels that could be result in short-term and/or long-term health effects.

- Result in the presence of contaminated soils or groundwater within the project area; thereby, exposing workers and/or the public to contaminated or hazardous materials during transmission line construction activities, at levels exceeding those permitted by California Occupational Safety and Health Administration (Cal/OSHA) in CCR Title 8, Chapter 4, Subchapter 7, Group 14 and 15, and Group 16, Articles 107, 109, and 110 and the Federal Occupational Safety and Health Administration (OSHA) in Title 29, CFR, Part 1910.

Construction Impacts

The RWEPP components would not traverse lands currently or historically used for military purposes; therefore, Impact P-4 (related to unexploded ordinance) would not occur.

Impact P-1: ~~Soil or groundwater contamination could result from accidental spill or release of hazardous materials due to improper handling and or storage of hazardous materials during construction activities~~ ~~Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination~~ (Class II)

Sempra RWEPP (Mexico) (Class II). Ground disturbance for the project and associated facilities would consist primarily of excavation for the following facilities: tower/turbine structures, meteorological towers, switchyard, underground interconnection systems between the tower/turbines and switchyard, transmission line, and operation and maintenance facilities. Grading of new access/spur roads would also be required.

Helicopters may be used to support construction activities in areas where access is limited or where there are environmental constraints to accessing the construction area with standard construction vehicles and equipment. All helicopter construction and maintenance activities would be based at a fly yard. Fuel storage tanks are expected to be staged at or near the laydown areas and resupplied throughout the construction period by commercial vendors. The total volume of fuel (primarily diesel fuel) onsite is not expected to exceed 1,000 gallons. Refueling activities for the helicopters could potentially result in soil contamination from improper handling and storage of helicopter fuel at the staging areas or during refueling, a significant impact.

Soil or groundwater contamination resulting from the improper handling and/or storage of hazardous materials is generally considered to be mitigable to less than significant levels. Mitigation recommended herein includes: (1) The prohibition of storage of fuels and hazardous materials within 200 feet of groundwater supply wells and within 400 feet of community or municipal wells; (2) prohibition of disposal of hazardous materials onto the ground, underlying groundwater, and any surface water; (3) removal of potentially hazardous materials to a hazardous waste facility permitted or otherwise authorized to treat, store, or dispose of such materials; and (4) in the event of a release of hazardous materials to the ground, the release will be promptly cleaned up in accordance with applicable regulations. Mitigation Measures P-1a (Implement Environmental Monitoring Program), P-1b (Maintain emergency spill supplies and equipment), and P-1g (Proper storage and disposal of generated waste) are also recommended. With the implementation of this mitigation, Impact P-1 would be reduced to a less than significant level (Class II).

Jacumba Substation, Baja Wind Transmission Line (Mexico to U.S.), 69 kV Transmission Line, Boulevard Substation Expansion, SDG&E Communication Facility (Class II). Hazardous materials such as vehicle fuels, oils, cleaners, and paints would be used and stored during excavation and grading of the site and construction at the substation facilities or along the transmission line resulting in a potential for environmental contamination due to improper handling and/or storage of hazardous materials, a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring

Program), P-1b (Maintain emergency spill supplies and equipment), P-1g (Properly store and dispose of generated waste), H-2b (No storage of fuels and hazardous materials near sensitive water resources), and H-2c (Proper disposal and clean-up of hazardous materials) would reduce the significant environmental impacts to less than significant (Class II).

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact P-1: Soil or groundwater contamination could result from accidental spill or release of hazardous materials due to improper handling and or storage of hazardous materials during construction activities ~~Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination~~

- P-1a Implement Environmental Monitoring Program.
- P-1b Maintain emergency spill supplies and equipment.
- P-1g Proper storage and disposal of generated waste. [HS-APM-10]
- H-2b No storage of fuels and hazardous materials near sensitive water resources. [WQ-APM-9]
- H-2c Proper disposal and clean-up of hazardous materials. [WQ-APM-13]

Impact P-2: Residual pesticides and/or herbicides could be encountered during grading or excavation on currently or historically farmed land in agricultural areas (No Impact, Class II)

SDG&E Jacumba Substation, Baja Wind Transmission Line (Mexico to U.S.), Boulevard Substation, SDG&E Communication Facility (No Impact) As discussed under Section 2.6, Agriculture, these project components would not traverse any agricultural lands; therefore, no residual pesticides and/or herbicides would be encountered during construction.

Sempra RWEPP (Mexico) and 69 kV Transmission Line (Class II). Residual pesticide and herbicide contamination of the soil and/or groundwater may exist along the portion of the 69 kV transmission line route that passes through irrigated agriculture at the north end of Jacumba Valley from MP BL-3.2 to BL-3.4. This represents a potential significant impact due to the potential health hazards to construction workers and the public from exposure to pesticide or herbicide contaminated soil and/or groundwater. Mitigation Measure P-2a (Test for residual pesticides/herbicides), P-2b (Stop work if contamination is detected.), P-2c (Cordon off contaminated areas), and P-2d (Notify regulatory agencies) is required to reduce this impact to less than significant (Class II).

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measure for Impact P-2: Residual Pesticides and/or Herbicides could be encountered during grading or excavation on currently or historically farmed land in agricultural areas

- P-2a Test for residual pesticides/herbicides currently or historically used form farming in agricultural areas.
- P-2b Stop work if contamination is detected. [HS-APM-15]
- P-2c Cordon off contaminated areas. [HS-APM-16]
- P-2d Notification of regulatory agencies. [HS-APM-17]

Impact P-3: Previously unknown soil and/or groundwater contamination could be encountered during excavation or grading (No Impact, Class II)

Sempra RWEF (Mexico) (Class II) Although unanticipated contamination in the RWEF area is unlikely due to the undeveloped nature of the area, there is a potential for unknown contamination to have occurred along and near area roads due to illegal dumping and near the town of La Rumorosa because of general water contamination concerns. This results in a potential to encounter contamination during RWEF construction. Contamination from petroleum products (gasoline, oil, and diesel) is one of the most common types of unknown contamination encountered and is generally detectable by visual and olfactory observation.

Impacts associated with previously unknown soil and/or groundwater contamination are generally considered to be mitigable to less than significant levels. Mitigation recommended herein includes: (1) If during excavation soil or groundwater contamination is suspected (e.g., unusual soil discoloration or strong odor), the contractor or subcontractor shall immediately stop work and notify the General Contractor's assigned Health & Safety Officer and/or the applicants Field Environmental Representative; (2) preliminary samples of the soil, groundwater, or material shall be taken by a trained individual and the samples shall be sent to an appropriate facility in Mexico for characterization; and (3) if contamination is found above regulatory limits, the regulatory agency (e.g., RWQCB or CUPA) responsible for responding to and for providing environmental oversight of the region shall be notified in accordance with State or local regulations. Mitigation Measure P-3a, P-2b, P-2c, and P-2d are recommended. Incorporation of these measures would reduce the impact to a less than significant level (Class II).

SDG&E Jacumba Substation, Sempra Baja Wind Transmission Line (Mexico to U.S.) (No Impact). Due to the undeveloped nature of the site no impacts from encountering unknown contamination are expected.

SDG&E 69 kV Transmission Line (Class II). At least two hazardous material sites are located along the 69 kV transmission line. These occur where the alignment passes through the community of Jacumba. Unreported or unidentified leaks or spills at these sites could have resulted in unknown soil or groundwater contamination that could have migrated to the alignment. In turn, this could be encountered during grading for access roads and excavation for tower foundations, and trenches and vaults. This would be a significant impact. Although unanticipated contamination along the other portions of the 69 kV transmission line is unlikely due to the primarily undeveloped and rural nature of the surrounding areas, there is an additional potential for unknown contamination to have occurred along and near area roads due to illegal dumping, which results in a potential to encounter contamination where the 69 kV transmission line is near or crosses these roads. The potential to encounter unknown environmental contamination is a significant impact. Contamination from petroleum products (gasoline, oil, and diesel) is one of the most common types of unknown contamination encountered and is generally detectable by visual and olfactory observation. Mitigation Measure P-3a, P-2b, P-2c, and P-2d are recommended. Incorporation of these measures would reduce the impact to a less than significant level (Class II).

SDG&E Boulevard Substation Expansion, SDG&E Communication Facility (Class II). There is a small potential that contamination from unknown spills or leaks that may have occurred in the past could have created localized soil contamination at the Boulevard Substation or at the White Star communication tower. The potential to encounter unknown environmental contamination is a significant impact. Contamination from petroleum products (gasoline, oil, and diesel) is one of the most common types of unknown contamination encountered and is generally detectable by visual and olfactory observation. Mitigation Measure P-2b, P-2c, P-2d, and P-3a are recommended. Incorporation of these measures would reduce the impact to a less than significant level (Class II).

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact P-3: Previously unknown soil and/or groundwater contamination could be encountered during excavation or grading

- P-2b** Stop work if contamination is detected. [HS-APM-15]
- P-2c** Cordon off contaminated areas. [HS-APM-16]
- P-2d** Notification of regulatory agencies. [HS-APM-17]
- P-3a** Appoint individuals with correct training for sampling, data review, and regulatory coordination.

Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites (No Impact, Class II)

Sempra RWEPP (Mexico) and Sempra Baja Wind Transmission Line (Mexico to U.S.) (No Data Available). An EDR would potentially reveal current or past known contamination sites. The presence of these contaminated sites adjacent to the wind farm or transmission line results in a significant potential for contaminated soil and/or groundwater to have migrated to the project ROW. Should contaminated sites be encountered, Mitigation Measure P-7a includes investigation of known contaminated sites prior to construction and disposal of hazardous waste in accordance with federal, Municipality, and local regulations. With the implementation of Mitigation Measure P-7a, Impact P-6 could be reduced to a less than significant level (No Data Available).

SDG&E Jacumba Substation (No Impact). No known existing soil or groundwater contamination occurs within the Jacumba Substation site.

SDG&E 69 kV Transmission Line (Class II). The environmental database review indicates that two sites with current or past known contamination (undergoing site assessment, remediation, or case closed) are listed along the 69 kV transmission line. These sites are located where the alignment passes through the community of Jacumba. Additionally, a further EDR review would potentially reveal other current or past known contamination sites. The presence of these contaminated sites adjacent to the alignment results in a significant potential for contaminated soil and/or groundwater to have migrated to the project ROW. The potential to encounter contamination during excavation or grading would result in a significant impact. Should contaminated sites be encountered, Mitigation Measure P-7a includes investigation of known contaminated sites prior to construction and disposal of hazardous waste in accordance with federal, Municipality, and local regulations. Mitigation Measure P-7b requires the investigation of all Government Code § 65962.5 sites or other known contamination sites along the transmission line ROW. With the implementation of the noted measures, Impact P-6 could be reduced to an insignificant level (Class II).

SDG&E Boulevard Substation Expansion and SDG&E Communication Facility (No Data Available). An EDR review would potentially reveal current or past known contamination sites. Should contaminated sites be encountered, Mitigation Measure P-7a includes investigation of known contaminated sites prior to construction and disposal of hazardous waste in accordance with federal, Municipality, and local regulations. With the implementation of the noted measures, Impact P-6 could be reduced to a less than significant level (No Data Available).

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites

- P-7a** Evaluate contaminated sites.
- P-7b** Investigate contaminated sites. [HS-APM-5]

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class II)

All Components (Class II). Soil or groundwater contamination would potentially result from accidental spill or release of hazardous materials during operation or maintenance of the Jacumba Substation, transmission line facilities, wind tower/turbines, and other associated facilities. Wastes resulting from wind facility maintenance typically include small amounts of gear oil and lubricating oils from yaw motors or transmission and glycol-based coolants from transmissions equipped with forced-flow radiator cooling loops. Mineral oil would likely be used in the new transformers, switches, circuit breakers, capacitors, and other new electrical equipment at the Jacumba Substation and Boulevard Substation Expansion. Mineral oil is considered a hazardous material under federal regulations (CWA Section 311), and mineral oil storage or use in aboveground storage containers in levels exceeding 660 gallons in a single oil storage tank or greater than 1,320 gallons in one or multiple containers at a site is regulated under Title 40, CFR, 112–“the SPCC rule” which is part of the federal Clean CWA. This impact would be significant without mitigation. However, implementation of mitigation measures listed below would reduce impacts to soil and groundwater to a less than significant level (Class II).

[The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measures for Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance

- P-1c** Personnel trained in proper use and safety procedures for the chemicals used. [HS-APM-1]
- P-1e** Preparation of environmental safety plans including spill prevention and response plan. [HS-APM-3]
- P-1g** Proper storage and disposal of generated waste. [HS-APM-10]

2.10.3 Electric and Magnetic Fields and Other Field-Related Concerns

The wind turbines would tie into the SWPL transmission line via the Jacumba Substation, which would require construction of an overhead transmission line. An additional 69 kV transmission line would interconnect the Jacumba Substation to the existing Boulevard Substation, which would be expanded to $\frac{3}{4}$ of an acre. The following section addresses impacts from safety and non-EMF electric power field issues.

Electric and Magnetic Fields. On January 26, 2006, the CPUC issued Decision D.06-01-042 which affirmed the low-cost/no-cost policy to mitigate EMF exposure from new utility transmission and substation projects. This decision also adopted rules and policies to improve utility design guidelines for reducing EMF. The CPUC stated “at this time we are unable to determine whether there is a significant scientifically verifiable relationship between EMF exposure and negative health consequences.”

As of the date of the publication, the CPUC has not implemented a general requirement that utilities include non-routine mitigation measures, or other mitigation measures that are based on numeric values of EMF exposure and has not adopted any specific limits or regulation on EMF levels related to electric power facilities. Mitigation measures may be determined on a project by project basis by the CPUC in any proceeding decision. For a full discussion on EMF related issues, please see Section D.10.20 in the January 2008 Draft EIR/EIS.

Impact PS-1: Transmission line operation causes radio and television interference (Class II)

Sempra RWEP (Mexico). Wind energy development has the potential to interfere with aircraft navigational systems. VOR systems are aircraft navigational radio beacons that are maintained by the FAA, as well as other forms of radar communications. It is generally concluded that little or no signal interference can occur when wind turbines are located more than 2 miles from either a runway or a beacon location (Shasta EA, 2007). The nearest airport, the Jacumba Airport, to the RWEP would be approximately 2.8 miles away. As such the wind turbines would not interfere with the Jacumba Airport navigational system (No Impact) and no mitigation is required.

The RWEP would also be adjacent to the U.S.-Mexico border, patrolled by aircraft by the Border Patrol. The U.S. Department of Energy's Frequently Asked Question about Wind and Radar states that the Department of Defense has direct experience with wind energy projects and successful radar operations on several domestic and overseas facilities. Wind projects are currently operating safely at military bases in Wyoming, California, Cuba and Ascension Island, all in close proximity to various forms of military and civilian radar (DOE, 2007). The DOE further states, that there are a number of technical mitigation options available today, including software upgrades to existing radar, processing filters related to signature identification, replacing aging radar, and potentially more. The Department of Energy is currently working with radar system experts across the country and overseas to catalogue known mitigation experiences, most promising options that exist, and those that are worth of developing in the future. Because of the Department of Defense's experience of successful radar operations in the vicinity of wind energy projects, this impact would be considered adverse but less than significant and no mitigation is required.

As stated by the DOE, wind turbines can sometimes cause electromagnetic interference affecting TV and radio reception. Such interference can typically be mitigated by using satellite TV or wireless cable TV and instances of TV or radio interference are infrequent. Mitigation Measures PS-1a and PS-1b are recommended to reduce the potential impacts of interference (Class II).

Sempra Baja Wind Transmission Line, SDG&E Jacumba Substation, SDG&E 69 kV Transmission Line, SDG&E Boulevard Substation Expansion, and SDG&E Communication Tower. Corona or gap discharges related to high frequency radio and television interference impacts are dependent upon several factors including the strength of broadcast signals and are anticipated to be very localized if it occurs. Individual sources of adverse radio/television interference impacts can be located and corrected on the power lines. Conversely, magnetic field interference with electronic equipment such as computer monitors can be corrected through the use of software, shielding or changes at the monitor location. Mitigation Measures PS-1a and PS-1b are recommended to reduce the potential impacts of interference (Class II).

[The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measures for Impact PS-1: Transmission line operation causes radio and television interference

PS-1a Limit the conductor surface electric gradient.

PS-1b Document and resolve electronic interference complaints.

Impact PS-2: Transmission line operation causes induced currents and shock hazards in joint use corridors (Class II)

All Components. Induced currents and voltages on conducting objects near the proposed transmission lines represent a potential significant impact that can be mitigated. These impacts do not pose a threat in the environment if the conducting objects are properly grounded, and Mitigation Measure PS-2a is implemented to reduce the potential impacts of induced currents (Class II). [The full text of Mitigation Measure PS-2a is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measure for Impact PS-2: Transmission line operation causes induced currents and shock hazards in joint use corridors

PS-2a Implement grounding measures.

Impact PS-3: Electric fields can affect cardiac pacemakers (Class III)

All Components. The electric fields associated with the Proposed Project's transmission lines may be of sufficient magnitude to impact operation of a few older model pacemakers resulting in them reverting to an asynchronous pacing. Cardiovascular specialists do not consider prolonged asynchronous pacing to be a problem; periods of operation in this mode are commonly induced by cardiologists to check pacemaker performance. Therefore, while the transmission line's electric field may impact operation of some older model pacemakers, the result of the interference is of short duration and is not considered significant or harmful (Class III). No mitigation measures are required or recommended.

Impact PS-4: Project structures would be affected by wind and earthquakes (Class III)

All Components. Transmission line structures used to support overhead transmission lines in the United States, must meet the requirements of the California Public Utilities Commission, General Order No. 95, Rules for Overhead Electric Line Construction. Transmission lines in Mexico are subject to the CFE laws and regulations. The General Order design code and the National Electrical Safety Code include loading requirements related to wind conditions. Transmission support structures are designed to withstand different combinations of loading conditions including extreme winds. These design requirements include use of safety factors that consider the type of loading as well as the type of material used, e.g., steel, wood, or concrete. Failures of transmission line support structures are rare, however they may occur as a result of extremely high loading conditions such as tornadoes, ice storms, or Santa Ana winds (see Section D.15.1 for a description of structure failures as a result of Santa Ana winds). The Semptra Presidential Permit and related facilities would be constructed on steel lattice towers or tubular steel poles, and failure would be extremely unlikely. Therefore, the public safety impact of wind effects on transmission towers is less than significant (Class III).

All Components Earthquakes. Overhead transmission lines consist of a system of support structures and interconnecting wire that is inherently flexible. Industry experience has demonstrated that under earthquake conditions structure and member vibrations generally do not occur or cause design problems. Overhead transmission lines are designed for dynamic loading under variable wind conditions that generally exceed earthquake loads (see Section D.13, Geology, for a discussion of underground transmission lines in the vicinity of active faults). The risk that an earthquake would cause overhead towers to threaten public safety is less than significant (Class III).

Impact PS-5: Transmission or substation facilities can suffer an outage (Class III)

All Components. If the Sempra Presidential Permit and related facilities along the transmission line were damaged (e.g., from terrorism or a major wildfire) and this resulted in a power outage, SDG&E would re-route electricity using other components of the regional transmission system. This was demonstrated in the October 2007 wildfires, when the 500 kV Southwest Powerlink was out of service for several days due to the proximity of the Harris Fire. Even though this transmission line generally imports the majority of San Diego's power, SDG&E was able to maintain service (to areas not directly burned) by re-routing electricity to lines that connect its system to the Southern California Edison system. The regional transmission system is interconnected in such a way that it is not possible to say that a single line outage would cause an outage at a specific hospital, airport, security facility, etc. In addition, although most facilities of this type may receive power from the SDG&E transmission system supplied by the proposed Sunrise line, major facilities would also have back up power/generators to prevent electricity interruptions in the event of an outage. Therefore, this impact is considered to be adverse, but less than significant (Class III).

2.11 Air Quality

2.11.1 Environmental Setting – Air Quality

Sempra RWEP (Mexico). Most urban areas along the U.S.-Mexico border do not meet the U.S. EPA air quality standards in ozone, carbon monoxide, and particulate matter. The contaminants in this border region come from a variety of sources such as open air burning (trash, residential heating, and brick ovens) dirt roads, energy plants, industrial sites, and transportation activities (U.S.EPA, 2003). Concentrations of particulate matter in Mexico also exceed the U.S. EPA standards in Tijuana (approximately 12 times per year) and Mexicali (more than 150 times per year) (CARB, 2002). Air quality problems in both Mexico and the United States can be attributed to a combination of local emissions and emissions from the opposite side of the border (CARB, 2001). The town of La Rumorosa and surrounding area is approximately 6 miles from the La Rumorosa Substation and 20 miles from major power plants in the Mexicali area.

Jacumba Substation, Baja Wind Transmission Line (Mexico to U.S.), 69 kV Transmission Line, Boulevard Substation Expansion, SDG&E Communication Facility. The air quality setting in the dry mountainous area of the Jacumba Substation, the transmission lines, and the Boulevard Substation Expansion is similar to that of the Anza-Borrego Link, which is described in Section D.11.2.2 of the Sunrise EIR/EIS (January, 2008). The wind project components, except for the RWEP in Mexico, would be within San Diego County, administered by the SDAPCD.

2.11.2 Environmental Impacts and Mitigation Measures – Air Quality

Like the RWD Project and Jacumba Substation analyzed in the Draft EIR/EIS, air quality impacts of the RWEP and the required transmission, substation, and communication components would result in one significant, unmitigable (Class I) impacts. However, because of the duration of the construction of the RWEP and related facilities, construction emissions would be longer in duration and more intensive in nature than for the RWD Project and Jacumba Substation.

Table 2.11-1 shows the level of significance of each air quality impact for the Sempra RWEP and associated components. This table compares the significance of each air quality impact as identified in the January 2008 Sunrise Powerlink Draft EIR/EIS, and as identified in this recirculated Draft EIR/EIS. Detailed discussions of each impact and the specific locations where each impact is identified are presented in the following sections. The complete impact analysis from the January 2008 Sunrise Powerlink Draft EIR/EIS is presented in Appendix 1.

Table 2.11-1. Comparison of Impacts Identified – Air Quality

Impact No.	Description	Impact Significance	
		Draft EIR/EIS	Recirculated Draft EIR/EIS
AQ-1	Construction would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class I	Class I
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class I

Table 2.11-1. Comparison of Impacts Identified – Air Quality

Impact No.	Description	Impact Significance	
		Draft EIR/EIS	Recirculated Draft EIR/EIS
AQ-2	Operation, maintenance, and inspections would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class III	Class III
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class III
AQ-3	Power generated during transmission line operation would cause emissions from power plants		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class IV	Class IV
	Jacumba Substation	No Impact	Class IV
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class IV
AQ-4	Project activities would cause a net increase of greenhouse gas emissions		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	n/a	Class III
	Jacumba Substation	n/a	Class III
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class III

Significance Criteria. The criteria used to assess the significance of air quality impacts resulting from the Semptra Presidential Permit and related facilities are the same as the significance criteria for the Sunrise Powerlink. Air quality impacts are characterized using location-specific criteria. Each local air quality management or air pollution control district establishes the criteria to be used to assess impacts of a project on air quality. Air quality impacts of the project would be considered significant if:

- The Proposed Project would be inconsistent with the applicable air quality plan.
- Activities associated with the Proposed Project would generate emissions of air pollutants that would exceed local air district CEQA thresholds (see Table D.11-8), or exceed federal General Conformity *de minimis* thresholds (see Table D.11-9), cause any adverse impact to air quality related values (AQRV) in a federal Class I area or State wilderness area, or create annual emissions within an attainment area greater than the U.S. EPA basic Prevention of Significant Deterioration emission thresholds of 250 tons per year of any pollutant.
- Activities associated with the Proposed Project would cause or contribute to any new violation of NAAQS or CAAQS in the project area; or interfere with the maintenance or attainment of NAAQS or CAAQS; or increase the frequency or severity of any existing violations of NAAQS or CAAQS; or delay the timely attainment of any standard, interim emission reduction, or other air quality milestone promulgated by the U.S. EPA, CARB, or local air quality agency.
- The Proposed Project would expose a substantial number of people to objectionable odors.
- The Proposed Project would expose sensitive receptors to substantial pollutant concentrations.

There are no State or local air district criteria for assessing the climate change impacts of projects, but for this project, climate change impacts would be considered significant if:

- Activities associated with the Proposed Project would result in greenhouse gas emissions substantially exceeding baseline greenhouse gas emissions. Consistent with the aim of AB32 to provide GHG reductions, overall Proposed Project GHG emissions would “substantially exceed” baseline emissions if the total effect of all project activities causes a net increase of GHG emissions over the baseline.
- The Proposed Project would increase the delivery of power produced at levels exceeding the CPUC Greenhouse Gas Emissions Performance Standard of 0.5 metric tons (1,100 lb) of CO₂ per megawatt-hour.

Construction Impacts

Impact AQ-1: Construction would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants (Class I)

Sempra RWEPP (Mexico). (Class I) Construction of the RWEPP would generate dust and exhaust emissions from construction activity and crews operating off-road equipment and on-road mobile sources at separate locations. General construction, structure foundation excavation, structure delivery and setup, and fugitive dust from travel along the site could each occur simultaneously on any given day of construction.

Construction emissions would vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions. The total amount of construction, the duration of construction, and the intensity of construction activity could have a substantial effect upon the amount of construction emissions, the concentrations, and the resulting impacts occurring at any one time. As exact construction scenarios for the RWEPP are not known, no emission forecasts are provided for the expected construction scenarios. However, it should be noted that within Mexico, the wind project construction is expected to take up to five years (from 2008 to 2013) to complete the 1,250 MW wind project (Sempra App., 2007). As such, the construction emissions for the wind project would be longer in duration and more intensive in nature than those for the other components of the RWEPP. As the wind project location is located adjacent to the U.S.-Mexico border, the emissions would impact both Mexico and the United States. Mitigation measures to reduce construction equipment impacts include Mitigation Measures AQ-1a through AQ-1g including preparation and implementation of a Dust Control Plan, minimize transport of mud and dust onto paved surfaces, encourage employee carpooling, and minimize idling time. While the recommended mitigation measures would reduce construction impacts, the air quality impacts from construction-phase emissions would be significant and unavoidable (Class I).

Baja Wind Transmission Line (Mexico to U.S.), 69 kV Transmission Line, Boulevard Substation Expansion, SDG&E Communication Facility. Construction of the Jacumba Substation, transmission lines, Boulevard Substation Expansion and SDG&E White Star Communication Facility would generate dust and exhaust emissions from activity and crews operating off-road equipment and on-road mobile sources at separate locations. General construction, structure foundation excavation, structure delivery and setup, and fugitive dust from travel along the ROW could each occur simultaneously on any given day of construction.

Construction emissions would vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions. The total amount of construction, the duration of construction, and the intensity of construction activity could have a substantial effect upon the amount of construction emissions, the concentrations, and the resulting impacts occurring at any one time. Exact construction scenarios are unavailable because the transmission routes are not

finalized and the wind project location is only vaguely defined in the Presidential Permit. Additionally, any part of the RWEP Presidential Permit project would require an independent permitting and environmental compliance process. Therefore, no emission forecasts are provided for the expected construction scenarios.

The construction equipment and emissions from motor vehicles used to mobilize the workforce and materials for construction would result in temporary significant ozone and particulate matter impacts. Excavation activities would also release emissions as a result of construction vehicle operations. Further, particulate matter would be released into the air in the form of fugitive dust. Mitigation measures to reduce construction equipment impacts include Mitigation Measures AQ-1a through AQ-1g including preparation and implementation of a Dust Control Plan, minimize transport of mud and dust onto paved surfaces, encourage employee carpooling, and minimize idling time. While the recommended mitigation measures would reduce construction impacts, the construction-phase emissions would be significant and unavoidable (Class I).

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact AQ-1: Construction would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants

- AQ-1a** **Suppress dust at all work or staging areas and on public roads.**
- AQ-1b** **Use low-emission construction equipment.**
- AQ-1c** **Comply with Imperial County dust control requirements. [AQ-APM-1]**
- AQ-1d** **Implement dust reduction measures. [AQ-APM-2]**
- AQ-1e** **Prevent transport of mud and dust. [AQ-APM-3]**
- AQ-1f** **Encourage carpooling. [AQ-APM-4]**
- AQ-1g** **Minimize vehicle idling. [AQ-APM-5]**

Operational Impacts

Impact AQ-2: Operation, maintenance, and inspections would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants (Class III)

All Components (Class III). Dust and exhaust emissions during operation, maintenance, and inspection activities of the RWEP components, associated transmission lines and substations would be generated by new vehicle trips to patrol and repair the transmission line and wind project. A minor increase in dust and exhaust emissions from the mobile sources would occur when compared to the existing conditions. The incremental increase of emissions that would be caused by vehicular traffic for inspection and maintenance activities would be less than the thresholds for operation significance in Table 2.11-2.

Table 2.11-2. Air Quality Significance Thresholds

Significance Thresholds	NOx	VOC	PM10	PM2.5	CO	SOx
Construction Significance	250 lb/day	75 lb/day	100 lb/day	55 lb/day	550 lb/day	250 lb/day
Construction Significance	40 ton/year	14 ton/year	15 ton/year	10 ton/year	100 ton/year	40 ton/year
Operation Significance	55 lb/day	55 lb/day	150 lb/day	55 lb/day	550 lb/day	150 lb/day

Source: SDAPCD, Rule 20.2(d)(2) for construction; ICAPCD CEQA Air Quality Handbook, 2007 for operation; SDC, 2007 for VOC and PM2.5.

Direct emissions from vehicular traffic for maintenance activities would cause an adverse but less than significant impact, and mitigation measures are not required (Class III).

Impact AQ-3: Power generated during transmission line operation would cause emissions from power plants (Class IV)

All Components (Class IV). The RWEP and associated transmission lines would facilitate decreased operation of other existing power plants delivering energy to San Diego County, which could lead to reduced emissions from fossil fuel-fired power plants. Demand for electricity would not change as a result of the RWEP, and power generated in response to the demand would occur regardless of whether the renewable project moves forward. The RWEP and associated transmission line would enable reductions of CO₂ and other pollutant emissions that would otherwise occur from fossil fuel-fired power plants. The RWEP would generate electricity without burning any carbon-based fuel and would thus generate essentially no greenhouse gases per megawatt-hour of output. Reduced emissions from fossil fuel-fired power plants would be a beneficial impact of the RWEP (Class IV).

Impact AQ-4: Project activities would cause a net increase of greenhouse gas emissions (Class III)

All Components (Class III). Developing LR would cause greenhouse gas (GHG) emissions during construction and installation of the facility that would be offset by the indirect net decrease in CO₂ emissions from power plants described in Impact AQ-3. Greenhouse gas emissions that would occur as a result of construction activities would be above the level of GHGs that occur in the baseline conditions shown in Table D.11-2, in Section D.11. Minor operational-phase GHG emissions would also occur with occasional maintenance of the wind facility. Overall, the GHG emissions related to deploying the wind component would eventually be offset by the GHG emissions that would be avoided by generating wind power, which would reduce emissions from fossil-fueled power plants. Net reductions of GHG emissions from the wind component would cause this impact to be adverse for the construction phase but less than significant overall (Class III).

2.12 Water Resources

2.12.1 Environmental Setting – Water Resources

Sempra RWEPP (Mexico). The wind turbines and associated transmission lines would be sited near La Rumorosa, Baja California. La Rumorosa is situated in the northern region of the municipality of Tecate, which has a low hydrologic potential. The rivers of this region, the “Calabazas,” “Agua Grande,” “San Pablo,” “El Cuartel,” and “Agua Azul” run only during the rainy season. La Rumorosa borders two hydrological regions. The first is over the water basin “Arroyo Agua Dulce–Santa Clara” (GobBC, 2007). This underground basin is bordered on the east side by the Sierra de Juárez Mountains and on the west by the Sierra Cucapah. These conditions create areas where drainage is poor and lagoons are formed as none of the rivers in this region can reach the Gulf of California. It is considered a closed basin. The use of this water is primarily for agriculture and ranching as well as domestic use. (GobBC, 2007).

La Rumorosa also borders the Colorado River region. The Colorado River, which has its origin in the United States, crosses approximately 55 miles within Baja California. This river does not always run within this region. Both the Hardy and Nuevo rivers are caused by agricultural runoff from the Mexicali region, in addition to runoff of the Colorado River. They are primarily used for irrigation. (GobBC, 2007)

Baja California does not have permanent aquifers. The hydrologic system is very reduced, with a high level of evaporation, and adverse geologic conditions (GobBC, 2007). The majority of the geological formations allow rain to flow freely due to the steep contours of this area. As such, very few of the aquifers get recharged and according to the geologic hydrologic conditions of the State of Baja California, water for the entire territory is in danger of depletion. The Tecate region currently imports some of its water from the United States, and receives the rest from underground aquifers. (Tecate Government, 2007)

Sempra Baja Wind Transmission Line (Mexico to U.S.). The 230 or 500 kV transmission line crosses no designated groundwater basin. The transmission line is located less than 1,000 feet outside the Coyote Wells Valley Groundwater Basin. The transmission line crosses one unnamed water crossing just north of the U.S.-Mexico border. Please see the Environmental Setting for the Sempra RWEPP above for information regarding the Mexican region of the 230 or 500 kV transmission line.

SDG&E Jacumba Substation. The Jacumba Substation would be located approximately 1 mile north of the U.S.-Mexico border and approximately 0.5 miles west of the San Diego/Imperial County border. The Jacumba Substation would be located on the Coyote Wells Valley Groundwater Basin. The Coyote Wells Valley groundwater basin is an EPA-designated Sole Source Aquifer. This means the aquifer supplies more than 50% of a community’s drinking water. Any project which is financially assisted by federal grants or federal loan guarantees, and which has the potential to contaminate a sole source aquifer, should be modified to reduce or eliminate the risk (EPA, 2007).

The Coyote Wells Groundwater Basin, located near the international border with Mexico in the western Yuha Desert west of Imperial Valley, is in unconsolidated sediment up to 650 feet thick. Water bearing zones are mostly 100 to 300 feet below ground surface. Unconfined shallow groundwater exists in parts of the basin, but the quality of the water is poor. Natural fluoride levels in some wells are as high as 3.5 mg/L (California Department of Water Resources, 2007).

SDG&E 69 kV Transmission Line. The 69 kV transmission line would be in the Jacumba Valley Groundwater Basin. The depth to groundwater in this basin exceeds 50 feet. The Jacumba Valley Groundwater

Basin lies within the southeastern Peninsular Ranges. The basin is bounded by faults on the east and west, and by the international border with the Republic of Mexico on the south. While it is possible that the basin continues into Mexico, information about the water basin in Mexico is not known. The remainder of the basin is bounded by crystalline rocks of the Peninsular Ranges. Several streams have deposited a thick section of alluvium in the central part of the valley, and several springs, including hot springs are found in the basin (California's Groundwater, 2008). Recharge from runoff come from Boundary Creek and Flat Creek.

The 69 kV transmission line crosses one unnamed creek near the U.S.-Mexico border, and crosses Boundary Creek and its tributaries seven times.

SDG&E Boulevard Substation Expansion. The Boulevard Substation Expansion would not cross any groundwater basin (U.S. EPA, 2008). However, according to many commenters from the Boulevard region, the unincorporated town of Boulevard does have mountain meadows, seeps, and springs that feed into a local aquifer that people depend on as their sole source of drinking water. The groundwater depth in this region varies and changes based on rainfall and recharge rates and specific details about this aquifer are unknown.

SDG&E Communication Facility. The White Star communication tower would not cross any groundwater basin (U.S. EPA, 2008). However, according to many commenters from the Boulevard region, the unincorporated town of Boulevard does have mountain meadows, seeps, and springs that feed into a local aquifer that people depend on as their sole source of drinking water. The groundwater depth in this region varies and changes based on rainfall and recharge rates and specific details about this aquifer are unknown.

2.12.2 Environmental Impacts and Mitigation Measures – Water Resources

Like the RWD Project and Jacumba Substation analyzed in the Draft EIR/EIS, water resource impacts of the RWEP and the required transmission, substation, and communication components would not result in any significant, unmitigable (Class I) impacts. The impact significance for the RWEP and related facilities would be the same as those for the RWD Project and Jacumba Substation, however more water resources would be impacted by the RWEP and related facilities than by the RWD and Jacumba Substation.

Table 2.12-1 shows the level of significance of each water resource impact for the Sempra RWEP and associated components. This table compares the significance of each water resource impact as identified in the January 2008 Sunrise Powerlink Draft EIR/EIS, and as identified in this recirculated Draft EIR/EIS. Detailed discussions of each impact and the specific locations where each impact is identified are presented in the following sections. The complete impact analysis from the January 2008 Sunrise Powerlink Draft EIR/EIS is presented in Appendix 1.

Table 2.12-1. Comparison of Impacts Identified – Water Resources

Impact No.	Description	Impact Significance	
		Draft EIR/EIS	Recirculated Draft EIR/EIS
H-1	Construction activity could degrade water quality due to erosion and sedimentation		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II	Class II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II
H-2	Construction activity could degrade water quality through spills of potentially harmful materials		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II, Class III	Class II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II
H-3	Power generated during transmission line operation would cause emissions from power plants		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II	Class II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II
H-4	Groundwater dewatering for project construction could deplete local water supplies		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II, Class III	Class II, Class III, No Impact
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II, Class III
H-5	Creation of new impervious areas could cause increased runoff resulting in flooding or increased erosion downstream		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II, Class III	Class II, Class III
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II, Class III
H-6	Transmission towers or other aboveground project features located in a floodplain or watercourse could result in flooding, flood diversions, or erosion		
	Wind Project in Mexico, Transmission Line to U.S.	Class II, Class III	Class II, No Data Available
	Jacumba Substation	No Impact	No Impact
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II, No Impact
H-7	Accidental releases of contaminants from project facilities could degrade water quality		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II	Class II, No Impact
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II, No Impact
H-8	Underground portions of the power line could be exposed during flow events causing damage to the line or to adjacent property		
	Wind Project in Mexico	Class II	Class II

Significance Criteria. The criteria used to assess the significance of water resource impacts resulting from the Sempra Presidential Permit and related facilities are the same as the significance criteria for the Sunrise Powerlink. Significance criteria are based on those listed in CEQA Appendix G, modified to be applicable and relevant to anticipated impacts of the project. Hydrology and water resources impacts would be significant if the project would:

- Violate any water quality standards or waste discharge requirements, create new sources of polluted runoff, or otherwise substantially degrade water quality.
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
- Place within a watercourse or flood hazard area structures which would impede or redirect flood flows, or otherwise substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation onsite/offsite.
- Substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite/offsite, or otherwise create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems.
- Result in or is subject to damage from inundation by mudflow.

Construction Impacts

Impact H-1: Construction activity could degrade water quality due to erosion and sedimentation (Class II)

Sempra RWEP (Mexico). (Class II) Construction of the wind tower/turbines, access/spur roads, substation, and operation and maintenance facilities would require excavation and grading. In addition, construction of the underground interconnections from the tower/turbines to the switchyard would require trench excavation and grading. Ground disturbing activities which lead to this impact would be extensive, particularly in areas where existing roads are not sufficient for access. Disturbance of soil during construction could result in soil erosion and lowered water quality through increased turbidity and sediment deposition into local streams.

Degradation of water quality due to erosion and sedimentation would be mitigable to less than significant levels (Class II). Mitigation includes preparation of a Storm Water Pollution Prevention Plan (H-1a), placement of structures and roadways shall avoid watercourses to the extent feasible (H-1d), establishment of exclusion zones along waterways (H-1e), installation of sedimentation control measures (H-1f), and construction of waterway crossings during low flow periods (H-1g).

Sempra Baja Wind Transmission Line (Mexico to U.S.) (Class II). The 230 or 500 kV transmission line would connect the RWEP to the Jacumba Substation. The 3 miles of new transmission line would require approximately 12 to 15 new towers, and each tower base would require grading and permanent disturbance of approximately 3,600 feet (Sempra Application for Presidential Permit, 2007). Due to the flat nature along transmission routes, minimum grading is anticipated. An intermittent desert wash crosses the southern portion of the transmission line in the United States and while placement of the towers would avoid the desert wash, the use of new or existing access roads could result in soil erosion and lowered water quality through increased turbidity and sediment deposition into local streams. Degr-

dation of water quality due to erosion and sedimentation would be mitigable to less than significant levels (Class II). Mitigation includes placement of structures and roadways to avoid watercourses to the extent feasible (Mitigation Measure H-1d), establishment of exclusion zones along waterways (Mitigation Measure H-1e), installation of sedimentation control measures (Mitigation Measure H-1f), and construction of waterway crossings during low flow periods (Mitigation Measure H-1g).

SDG&E Jacumba Substation (Class II). The Jacumba Substation would require a substantial amount of local grading (approximately 85 acres) involving some cut and fill earthwork. A drainage plan would be required. This substation is in a hilly area and at the border of a Sole Source Aquifer. Since grading will be substantial, the potential for erosion of cut and fill slopes would be substantial during a rainfall event, but disturbance of surface flows during construction is unlikely due to the upland location (there is little flow through the site; it would originate onsite).

Mitigation Measure H-1h requires compliance with General Permit for Storm Water Discharges Associated with Construction Activity (NPDES permit) authorization from the State Water Resources Control Board and/or the RWQCB for construction activities. Compliance would require development of a SWPPP which would describe implementation of erosion control best management practices which would include measures such as soil binders, hydroseeding, siltation control structures such as geotextiles and mats, and streambank stabilization. Compliance and best management practices would be according to RWQCB guidelines.

Development of and compliance with a SWPPP is normally sufficient to reduce construction effects to a less than significant level. However, due to the extensive grading and earthwork involved in this natural area, standard BMPs may not be sufficient to prevent significant local erosion and downstream watercourse siltation if heavy rains occur during construction. Therefore, Impact H-1 would be significant without mitigation. Mitigation Measure H-1a is required to ensure these impacts are less than significant. Mitigation Measure H-1a requires grading to occur during the dry season to avoid water quality impacts, and erosion and sediment control BMPs to be in place prior to the onset of seasonal rains. With implementation of Mitigation Measure H-1a, Impact H-1 would be less than significant (Class II).

SDG&E 69 kV Transmission Line (Class II). Two streams are potentially at risk of water quality degradation due to construction-induced erosion and sedimentation in the 69 kV transmission line. The majority of the 69kV transmission line (9.3 miles) is located within an already existing 500 kV ROW and therefore already graded, or primarily flat. The remaining 4.2 miles are located adjacent to existing roadways, also already graded. Therefore minimum grading is anticipated. Additionally, the towers can be sited to avoid these stream crossings. However, the use of new or existing access roads would potentially result in soil erosion and lowered water quality through increased turbidity and sediment deposition into the local streams. Degradation of water quality due to erosion and sedimentation would be mitigable to less than significant levels (Class II). Mitigation includes placement of structures and roadways to avoid watercourses to the extent feasible (H-1d), establishment of exclusion zones along waterways (H-1e), installation of sedimentation control measures (H-1f), and construction of waterway crossings during low flow periods (H-1g).

SDG&E Boulevard Substation Expansion and SDG&E Communication Facility (Class II). The Boulevard Substation Expansion and the White Star communication tower would be constructed on previously disturbed land and would require the demolition of existing facilities. Substantial additional grading would be required to prepare the $\frac{3}{4}$ acre site for the Boulevard Substation Expansion. Although neither the Boulevard Substation nor the White Star communication tower would be located on a groundwater basin, the Boulevard region does have aquifers that are used as sole source drinking sources for many

residences. As such, degradation of water quality due to soil erosion or through increased turbidity and sediment deposition would be a significant impact. This impact would be mitigable to a less than significant level with the implementation of Mitigation Measures H-1a (Prepare substation grading and drainage plan), H-1f (Develop and implement construction BMPs), and Mitigation Measures H-1h (Compliance with NPDES regulations).

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measure for Impact H-1: Construction activity could degrade water quality due to erosion and sedimentation

- H-1a** Prepare Substation Grading and Drainage Plan; construct during the dry season.
- H-1d** Avoid watercourses to the maximum extent possible. [WQ-APM-2]
- H-1e** Identify and mark sensitive areas for avoidance. [WQ-APM-3]
- H-1f** Develop and implement construction Best Management Practices. [WQ-APM-4]
- H-1g** Stream crossings at low flow periods. [WQ-APM-5]
- H-1h** Compliance with NPDES regulations. [WQ-APM-14]

Impact H-2: Construction activity could degrade water quality through spills of potentially harmful materials (Class II)

Sempra RWEPP (Mexico) (Class II). Accidental spills or disposal of potentially harmful materials used during construction could wash into and pollute surface waters or groundwater. Materials that could contaminate the construction area or spill or leak include lead-based paint flakes, diesel fuel, gasoline, lubrication oil, hydraulic fluid, antifreeze, transmission fluid, lubricating grease, and other fluids.

Although there are limited waterways and many of the waterways do not run during the dry season, degradation of water quality could still occur as the rivers do not follow a well established path. In addition, the depth to groundwater in the project area is unknown. Mitigation Measures H-1c (Minimize construction and maintenance disturbance to riparian areas), H-1d (Avoid watercourses to the maximum extent possible), and H-1i (Construction routes to avoid and minimize disturbance to stream channels) would situate construction activities away from streams where possible. Mitigation Measures H-2a (Groundwater testing and treatment before disposal), H-2b (No storage of fuels and hazardous materials near sensitive water resources), and H-2c (Proper disposal and clean-up of hazardous materials) address the issue of water quality contamination through material spills by ensuring that excavated groundwater (if contaminated) not be returned to the natural system, proper storage and handling of hazardous materials, and proper materials disposal and clean-up during construction. These impacts would be less than significant (Class II) with implementation of the measures listed below.

Sempra Baja Wind Transmission Line (Mexico to U.S.) and 69 kV Transmission Line (Class II). Accidental spills or disposal of harmful materials used during construction could wash into and pollute surface waters or groundwater. This is especially true adjacent to the stream crossings. Materials that could contaminate the construction area or spill or leak include lead-based paint flakes, diesel fuel, gasoline, lubrication oil, hydraulic fluid, antifreeze, transmission fluid, lubricating grease, and other fluids. With implementation of Mitigation Measures H-1h, H-2a, H-2b, and H-2c, Impact H-2 is less than significant (Class II).

SDG&E Jacumba Substation, SDG&E Boulevard Substation Expansion, and SDG&E Communication Facility (Class II). Accidental spills or disposal of potentially harmful materials used during construction could wash into and pollute surface waters or groundwater. Materials that could contaminate

the construction area or spill or leak include lead-based paint flakes, diesel fuel, gasoline, lubrication oil, hydraulic fluid, antifreeze, transmission fluid, lubricating grease, and other fluids. With implementation of Mitigation Measures H-1h, H-2a, H-2b, and H-2c, Impact H-2 is less than significant (Class II). [The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measures for Impact H-2: Construction activity could degrade water quality through spills of potentially harmful materials

- H-1c** **Minimize construction and maintenance disturbance to riparian areas.** [WQ-APM-1]
- H-1d** **Avoid watercourses to the maximum extent possible.** [WQ-APM-2]
- H-1h** **Compliance with NPDES regulations.** [WQ-APM-14]
- H-1i** **Construction routes to avoid and minimize disturbance to stream channels.** [WQ-APM-15]
- H-2a** **Groundwater testing and treatment before disposal.** [WQ-APM-8]
- H-2b** **No storage of fuels and hazardous materials near sensitive water resources.** Storage of fuels and hazardous materials will be prohibited within 200 feet of groundwater supply wells and within 400 feet of community or municipal wells. [WQ-APM-9]
- H-2c** **Proper disposal and clean-up of hazardous materials.** Hazardous materials will not be disposed of onto the ground, the underlying groundwater, or any surface water. Totally enclosed containment will be provided for trash. Petroleum products and other potentially hazardous materials would be removed to a hazardous waste facility permitted or otherwise authorized to treat, store, or dispose of such materials. In the event of a release of hazardous materials to the ground, it will be promptly cleaned up in accordance with applicable regulations. [WQ-APM-13]

Impact H-3: Excavation could degrade groundwater quality in areas of shallow groundwater (Class II)

Sempra RWEP (Mexico) (Class II) The RWEP would be located in the “Arroyo Agua Dulce–Santa Clara” water basin. Depth to groundwater in this basin is unknown; however, this underground basin is bordered on the east side by the Sierra de Juárez Mountains and on the west by the Sierra Cucapah. These conditions create areas where drainage is poor and lagoons are formed as none of the rivers in this region can reach the Gulf of California. Such conditions may also create a shallow depth to groundwater which would lead to the possibility of encountering and degrading groundwater during construction. Degradation of groundwater, if encountered, would be a significant impact without mitigation. Mitigation Measures H-1c (Minimize construction and maintenance disturbance to riparian areas), H-1d (Avoid watercourses to the maximum extent possible.), H-2b (No storage of fuels and hazardous materials near sensitive water resources.), and H-2c (Proper disposal and clean-up of hazardous materials.) would reduce impacts to less than significant (Class II). Mitigation Measure H-1h (Compliance with NPDES regulations.) would not be required in Mexico.

Sempra Baja Wind Transmission Line (Mexico to U.S.) and SDG&E Jacumba Substation (Class II). The 230 or 500 kV transmission line does not cross a groundwater basin. The transmission line is located less than one-tenth of a mile outside the Coyote Wells Valley Groundwater Basin, a sole source aquifer. Degradation of the Coyote Well Valley Groundwater Basin would be a significant impact. The Jacumba Substation would be located on the border of the Coyote Wells Valley Groundwater Basin. Since the depth to groundwater in this basin generally exceeds 50 feet, which is below the maximum depth of tower construction, there is little possibility of encountering and degrading groundwater during construction. However, unconfined shallow groundwater exists in parts of the basin. In these regions,

degradation of groundwater quality would be a significant impact. Mitigation Measures H-1c (Minimize construction and maintenance disturbance to riparian areas), H-1d (Avoid watercourses to the maximum extent possible.), H-2b (No storage of fuels and hazardous materials near sensitive water resources.), H-2c (Proper disposal and clean-up of hazardous materials.) and H-1h (Compliance with NPDES regulations.) would reduce impacts to less than significant (Class II). Mitigation Measure H-1h (Compliance with NPDES regulations.) would not be required for the Mexican portion of the Baja Wind Transmission Line.

SDG&E 69 kV Transmission Line (Class II). Excavation for tower foundations in shallow groundwater could contaminate groundwater through accidental material spills. This impact is unlikely to occur primarily for the reason that Jacumba Valley Groundwater Basin at the location of the project is deeper than the expected depth of excavation, resulting in little chance for direct contamination. Degradation of groundwater, if encountered, would be a significant impact without mitigation. Mitigation Measures H-1c (Minimize construction and maintenance disturbance to riparian areas), H-1d (Avoid watercourses to the maximum extent possible.), H-2b (No storage of fuels and hazardous materials near sensitive water resources.), H-2c (Proper disposal and clean-up of hazardous materials.) and H-1h (Compliance with NPDES regulations.) would reduce impacts to less than significant (Class II).

SDG&E Boulevard Substation Expansion and SDG&E Communication Facility (Class II). The Boulevard Substation Expansion and the White Star communication tower would not cross any groundwater basin. However, as stated in the environmental setting, a local aquifer exists in the Boulevard region and many residents use the aquifer for drinking water wells. As the aquifer is not confined to a basin, the depth to groundwater varies. As such, any degradation to the groundwater quality would be considered a significant impact. Mitigation Measures H-1c (Minimize construction and maintenance disturbance to riparian areas), H-1d (Avoid watercourses to the maximum extent possible.), H-2b (No storage of fuels and hazardous materials near sensitive water resources.), H-2c (Proper disposal and clean-up of hazardous materials.) and H-1h (Compliance with NPDES regulations.) would reduce impacts to less than significant (Class II).

[The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measures for Impact H-3: Excavation could degrade groundwater quality in areas of shallow groundwater

- H-1c** Minimize construction and maintenance disturbance to riparian areas. [WQ-APM-1]
- H-1d** Avoid watercourses to the maximum extent possible. [WQ-APM-2]
- H-1h** Compliance with NPDES regulations. [WQ-APM-14] (For the United States only)
- H-2b** No storage of fuels and hazardous materials near sensitive water resources. [WQ-APM-9]
- H-2c** Proper disposal and clean-up of hazardous materials. [WQ-APM-13]

Impact H-4: Groundwater dewatering for project construction could deplete local water supplies (Class II, Class III, No Impact)

Sempra RWEF (Mexico). (Class II) The RWEF areas would be located in the “Arroyo Agua Dulce-Santa Clara” water basin. Depth to groundwater in this basin is unknown; however, this underground basin is bordered on the east side by the Sierra de Juárez Mountains and on the west by the Sierra Cucapah. These conditions create areas where drainage is poor and lagoons are formed as none of the rivers in this region can reach the Gulf of California. Such conditions may also create a shallow depth to groundwater. Dewatering for tower or wind project construction in shallow parts of the basin could result in a

local and temporary drawdown of groundwater levels which could temporarily reduce the yield of nearby water supply wells, resulting in a significant impact mitigable to a less than significant level (Class II) with implementation of Mitigation Measure H-4a, which requires identification of wells and provision of alternate water supplies during the period of depletion.

Sempra Baja Wind Transmission Line (Mexico to U.S.) (No Impact). Because the 230 or 500 kV transmission line does not cross a groundwater basin, this impact would not occur.

SDG&E Jacumba Substation (Class III). It is possible that excavation for the substation, especially near drainageways, would encounter subsurface water; however it is less likely to occur due to the depth of the groundwater basin. Dewatering could result in a local drawdown of water levels that could temporarily affect the water supply to local vegetation. This impact would be temporary and localized, and should not have any long-term adverse effect (Class III). No mitigation is required.

SDG&E 69 kV Transmission Line (Class III). The 69 kV transmission line would cross the Jacumba Valley Groundwater Basin. Since the depth to groundwater in these basins exceeds 50 feet, which is below the maximum depth of tower construction, it is unlikely that there is a need to dewater excavations for construction. It is possible that excavation for the substation, especially near drainageways, would encounter local subsurface water; however it is less likely to occur due to the depth of the groundwater basin. Dewatering could result in a local drawdown of water levels that could temporarily affect the water supply to local vegetation. This impact would be temporary and localized, should not have any long-term adverse effect (Class III), and no mitigation is required.

SDG&E Boulevard Substation Expansion and SDG&E Communication Facility (Class II). An aquifer exists in the Boulevard region that many residents use to supply their drinking water wells. Dewatering or blasting for the Boulevard Substation Expansion or White Star communication tower could result in a local and temporary drawdown of groundwater levels which could temporarily reduce the yield of nearby water supply wells. Dewatering could result in a local drawdown of water levels that could temporarily affect the water supply to local vegetation. This impact would be temporary and localized, should not have any long-term adverse effect. Nonetheless, reduced water flows in wells and springs would be significant should it occur. This impact would be significant (Class II), but it could be mitigated to a less than significant level through implementation of Mitigation Measure H-4a, Avoid using source water and provide alternative sources where avoidance is not possible, and Mitigation Measures H-4b, Avoid blasting where damage to groundwater wells or springs could occur.

[The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measure for Impact H-4: Groundwater dewatering for project construction could deplete local water supplies

H-4a **Avoid using source water and provide alternative sources where avoidance is not possible.**
 [WQ-APM-6]

H-4b **Avoid blasting where damage to groundwater wells or springs could occur.**

Operational Impacts

Impact H-5: Creation of new impervious areas could cause increased runoff resulting in flooding or increased erosion downstream (Class II, Class III)

Sempra RWEP (Mexico) (Class III). Construction of turbine foundations and access roads would result in additional runoff through creation of impervious areas and compaction of soils. Impervious areas and compacted soils generally have higher runoff coefficients than natural areas. In the case of the alternative, there may be small local increases in runoff by this process, but the total area affected would be very small in comparison to the total watershed. Further, this area is very sparsely developed and the soil is porous. Any small increase in runoff would not have an appreciable impact. Impact H-5 is less than significant (Class III).

Sempra Baja Wind Transmission Line (Mexico to U.S.) and SDG&E 69 kV Transmission Line (Class III). Construction tower foundations and access roads would result in additional runoff through creation of impervious areas and compaction of soils. Impervious areas and compacted soils generally have higher runoff coefficients than natural areas. There may be small local increases in runoff by this process, but the total area affected at each tower would be very small in comparison to the total watershed. Further, this area is very sparsely developed and the soil is porous. Any small increase in runoff would not have an appreciable impact. Impact H-5 is less than significant (Class III).

SDG&E Jacumba Substation (Class II). The substation would have a building pad of approximately 62 acres which would have a higher runoff coefficient than the existing ground, resulting in increased local peak flow rates, volumes and runoff frequency. This impact would be local and in the drainage ways immediately downstream of the substation. Effects would diminish to negligible in the downstream direction as overall watershed size increases. Local increases in runoff could be substantial, resulting in local offsite erosion which would occur in the area immediately downstream of the substation. Impact H-5 would be significant without mitigation; however, Mitigation Measure H-5a would reduce this impact to less than significant (Class II.)

SDG&E Boulevard Substation Expansion (Class II). The substation would have a building pad of approximately 3/4 acres which would have a higher runoff coefficient than the existing ground, resulting in increased local peak flow rates, volumes and runoff frequency. This impact would be local and in the drainage ways immediately downstream of the substation. Effects would diminish to negligible in the downstream direction as overall watershed size increases. Due to the expansion of the graded area, local increases in runoff could occur, resulting in local offsite erosion which would occur in the area immediately downslope of the substation. Impact H-5 would be significant without mitigation; however, Mitigation Measure H-5a would reduce this impact to less than significant (Class II.)

SDG&E Communication Facility (No Impact). The White Star communication tower would require the destruction of the existing communication facility at this location and the construction of a new communication tower. This would not result in a higher runoff coefficient than the existing ground, and no mitigation is required.

[The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measure for Impact H-5: Creation of new impervious areas could cause increased runoff resulting in flooding or increased erosion downstream

H-5a Install substation runoff control.

Impact H-6: Transmission towers or other aboveground project features located in a floodplain or watercourse could result in flooding, flood diversions, or erosion (Class II, No Data, No Impact)

Sempra RWEPP (Mexico) (No Data Available). Limited data is available regarding the floodplain and watercourses surrounding the La Rumorosa region. Encroachment of project tower/turbine structures, access roads, or other associated facilities into a flow path or floodplain could result in flooding of or erosion damage to the encroaching structure, diversion of flows and increased flood risk for adjacent property, or increased erosion on adjacent property. This impact is likely to occur only where other permanent project features are constructed in or closely adjacent to a watercourse. Placement of wind towers in watercourses is unlikely because wind tower/turbines would be sited along hill tops and ridges where optimum wind conditions exist. However, project access roads could traverse a flow path or floodplain.

Impacts to water resources from flooding or erosion caused by locating RWEPP structures or associated facilities in a floodplain or watercourse would be significant without mitigation. Implementation of Mitigation Measures H-1i and H-6a would reduce this impact to less than significant levels.

Sempra Baja Wind Transmission Line (Mexico to U.S.) and SDG&E 69 kV Transmission Line (Class II). Encroachment of project towers or associated facilities into a flow path or floodplain could result in flooding of or erosion damage to the encroaching structure, diversion of flows and increased flood risk for adjacent property, or increased erosion on adjacent property. This impact is likely to occur because the transmission route is located in an intermittent desert wash. Impacts to water resources from flooding or erosion caused by the transmission towers in a floodplain or watercourse would be significant without mitigation. Implementation of Mitigation Measures H-1i and H-6a would reduce this impact to less than significant levels (Class II).

SDG&E Jacumba Substation, SDG&E Boulevard Substation Expansion, SDG&E Communication Facility (No Impact). These sites are not located in floodplains or water courses, so no impact to water flow would occur.

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measure for Impact H-6: Transmission towers other aboveground project features located in a floodplain or watercourse could result in flooding, flood diversions, or erosion

- H-1i** Construction routes to avoid and minimize disturbance to stream channels. [WQ-APM-15]
- H-6a** Scour protection to include avoidance of bank erosion and effects to adjacent property.

Impact H-7: Accidental releases of contaminants from project facilities during operation could degrade water quality (Class II, Class III, No Impact)

Sempra RWEPP (Mexico) (Class II). Oil and other contaminants could be used to maintain the wind towers/turbines and associated facilities and the equipment used for maintenance. These contaminants would likely be stored at the maintenance facilities of the RWEPP and would be subject to the regulation of the facility. During their use or storage, oil or other contaminants could be released accidentally and contaminate local surface water or groundwater. Depth to groundwater in the “Arroyo Agua Dulce-Santa Clara” water basin is unknown; however, this underground basin is bordered on the east side by the Sierra de Juárez Mountains and on the west by the Sierra Cucapah. These conditions create areas where drainage is poor and lagoons are formed as none of the rivers in this region can reach the Gulf of California. Such conditions may also create a shallow depth to groundwater. Degradation of water quality from the accidental release of contaminants would be a significant impact without mitigation. Implementation of Mitigation Measure H-7a would reduce this impact to less than significant (Class II). The proper Mexican authorities would review the Hazardous Substance Control and Emergency Response Plan for the RWEPP.

Sempra Baja Wind Transmission Line (Mexico to U.S.) and SDG&E 69 kV Transmission Line (No Impact). Because contaminants would not be stored at the transmission line sites, accidental releases of contaminants from project facilities would not occur (No Impact) and no mitigation is required.

SDG&E Jacumba Substation and SDG&E Boulevard Substation Expansion (Class II). Oil and other contaminants from new electrical equipment at the substation could be released accidentally and contaminate local surface water or downstream groundwater, a significant impact without mitigation. However, with the implementation of MM H-2c, nNo spill would enter directly into surface water, ~~although a large spill at the Jacumba Substation could travel downstream into Boulder Creek, resulting in a significant impact without mitigation.~~ Mitigation Measure H-2c will mitigate this impact by requiring clean-up of spills and proper storage and disposal of contaminants. Additionally, Mitigation Measure H-7a requires development of a Hazardous Substance Control and Emergency Response Plan for project operation. Implementation of these mitigation measures would reduce impacts to water quality to less than significant levels (Class II.) The full text of the mitigation measure is included in Appendix 12 of this EIR/EIS.

SDG&E Communication Facility (No Impact). Because contaminants would not be stored at the White Star communication tower, accidental releases of contaminants from project facilities would not occur and no mitigation is required.

Mitigation Measure for Impact H-7: Accidental releases of contaminants from project facilities could degrade water quality

H-7a Develop Hazardous Substance Control and Emergency Response Plan for project operation.

Impact H-8: Underground portions of the power line could be exposed during flow events causing damage to the line or to adjacent property (Class II, No Impact)

Sempra RWEF (Mexico) (Class II). During flow events stream channel beds can become scoured to the point where objects buried beneath them could be exposed. The depth of scour is generally greater with larger magnitude flood events. The RWEF would include underground power line interconnections between the wind turbines and the switchyard. While there are limited waterways in the project area, the burying of an interconnection under a waterway may be required. Exposure of the buried power line could result in damage to the line or in damage to adjacent property as the exposed line exacerbates the potential for local scour. At places where the buried power line interconnections cross below stream beds, the burial depth should be great enough to protect against scour.

The potential for underground portions of the RWEF to be subject to damage from scour is considered to be mitigable to less than significant levels (Class II). Available mitigation includes Mitigation Measures H-6a that would avoid bank erosion and effects to adjacent property. The full text of the mitigation measure is included in Appendix 12 of this EIR/EIS.

SDG&E Jacumba Substation, Sempra Baja Wind Transmission Line (Mexico to U.S.), SDG&E 69 kV Transmission Line, SDG&E Boulevard Substation Expansion, SDG&E Communication Facility (No Impact). Neither the Jacumba Substation, nor the transmission lines, nor the Boulevard Substation Expansion would include underground transmission components.

Mitigation Measure for Impact H-8: Underground portions of the power line could be exposed during flow events causing damage to the line or to adjacent property

H-6a Scour protection to include avoidance of bank erosion and effects to adjacent property.

2.13 Geology, Mineral Resources, and Soils

2.13.1 Environmental Setting – Geology, Mineral Resources, and Soils

Sempra RWEPP (Mexico)

Regional Physiography. The principal mountain system in Baja California traverses the state longitudinally, beginning with the Sierra de Juárez in the north and continuing in the South as the Sierra de San Pedro Mártir, at which point this mountain chain divides into many smaller peaks until reaching South Baja California. This formation has given rise to a variety of topography, valleys, peaks, grasslands, etc. and are a continuation of the San Diego Mountain chain (GobBC, 2007).

Geology. The Baja California peninsula underwent geologic conditions and tectonic movement that gave rise to the geologic structure and physical orientation, primarily seen in the mountain ranges along the length of the state. These mountain chains have a massive granite base (batholith,) most evident in the North and hidden in the South of the state under large amounts of volcanic materials (GobBC, 2007).

Slope Stability. The RWEPP traverses hills, mesas, and valleys of the Sierra de Juárez Mountains. Although this crosses moderately sloping hills and valleys, these areas are underlain primarily by granitic and volcanic units which are not typically prone to landslides. However, excavation and grading for the project could potentially trigger rock-falls or shallow soil slides (GobBC, 2007).

Soils. A summary of the significant characteristics (description, erosion hazard, expansive potential, and corrosion potential) of the major soil associations traversed by the RWEPP are shown below. This data was taken from the official Baja California website.

- **Regosol.** This soil is characterized by not having distinct soil layers. It has a general clear tone and is found in beaches and dunes, and on mountain sides. It is often accompanied by litosols and rock formation. It has varied fertility and often rocky.
- **Litosol.** This soil is distinguished by having a depth of less than 10 centimeters. It is found on mountains and steep slopes. It can be sandy or more clay like and can be susceptible to erosion, depending on the topography of the region.
- **Fluvisol.** This soil is distinguished by being formed by water borne particles. It is a poorly developed soil and is found in all areas of Baja California that are near lakes or mountains. It frequently has alternating layers of sand, clay, or pebbles.

Most of the soil associations underlying the region are primarily formed in material weathered from the underlying granitic and metamorphic rocks. Hazard of erosion for these soils was unavailable. There would be no desert pavement in the RWEPP site.

Mineral Resources. General mineral resources in the region of the wind project and transmission line are possible granite and quartz deposits within the Sierra de Juárez region (GobBC, 2007). Mining operations, however, do not occur in the La Rumorosa region and as such, the RWEPP would not impact active mining operations.

Sempra Baja Wind Transmission Line (Mexico to U.S.)

Geology. The 230 or 500 kV transmission line crosses valleys of the Jacumba Mountains in the United States and valleys of the Sierra de Juárez in Mexico and is underlain in part by Quaternary alluvium (Qal). A general description of the characteristic of this unit is presented in Draft EIR/EIS Section D.13 in Table D.13-1. For information about the geological region in Mexico please see the Environmental Setting for the RWEP below.

Slope Stability. The 230 or 500 kV transmission line traverses near and across gently sloping alluvial fans and valley floors. Although a large portion of the alignment cross moderately sloping hills and valleys, these areas are underlain primarily by granitic and metamorphic units which are not typically prone to landslides. However, excavation and grading for the project could potentially trigger rock-falls or shallow soil slides. For information about the slope stability in Mexico please see the Environmental Setting for the RWEP below.

Soils. The 230 or 500 kV transmission line traverses at least two soil associations; the Indio-Gilman-Coachella (s992) and the Rositas-Orita-Carrizo-Aco association. Hazard of erosion for these soils for off-road/off-trail ranges from slight to moderate and for on on-road/on-trail ranges from slight to moderate. Shrink/swell (expansive) potential of the soils associations along this alignment varies from low to moderate. Corrosive potential of soils along the alignment is high for uncoated steel and ranges from low to moderate for concrete. The basic characteristics of these soil associations are presented in Draft EIR/EIS Table D.13-2. Other similar soils may also be encountered along the alignment. For information about the soils in Mexico please see the Environmental Setting for the RWEP above. No desert pavement is located along the 230 or 500 kV transmission line ROW.

Mineral Resources. There are no known active mineral resource sites or BLM claims along the alignment. Therefore, there would be no impacts related to accessibility of mineral resources. For information about the mineral resources in Mexico please see the Environmental Setting for the RWEP below.

Seismicity. The transmission alignment does not cross nor is in close proximity to any active faults and is therefore not likely to be damaged by fault rupture. The site may experience moderate groundshaking from earthquakes on nearby significant active faults, i.e., the Elsinore, or Laguna Salada located east of the alignment. Estimated PGAs along the alignment range from 0.3 g to 0.4g, with the higher PGAs in areas underlain by alluvial deposits. Portions of the site alignment are underlain by Quaternary alluvium and would likely be susceptible to liquefaction-related phenomena in areas underlain by saturated sandy deposits. Seismicity in Mexico along the transmission line is not known.

SDG&E Jacumba Substation

Geology. The Jacumba Substation crosses hills and valleys of the Jacumba Mountain and is primarily underlain by Quaternary alluvium (Qal). A general description of the characteristic of this unit is presented in Draft EIR/EIS Section D.13 in Table D.13-1.

Slope Stability. The Jacumba Substation traverses near and across gently sloping alluvial fans and valley floor, and moderately sloping hillside terrain. Although a large portion of the alignment cross moderately sloping hills and valleys, these areas are underlain primarily by granitic and metamorphic units which are not typically prone to landslides. However, excavation and grading for the project could potentially trigger rock-falls or shallow soil slides.

Soils. The Jacumba Substation traverses at least two soil associations; the Indio-Gilman-Coachella (s992) and the Rositas-Orita-Carrizo-Aco association. Hazard of erosion for these soils for off-road/off-trail ranges from slight to moderate and for on on-road/on-trail ranges from slight to moderate. Shrink/swell (expansive) potential of the soils associations along this alignment varies from low to moderate. Corrosive potential of soils along the alignment is high for uncoated steel and ranges from low to moderate for concrete. The basic characteristics of these soil associations are presented in Draft EIR/EIS Table D.13-2. Other similar soils may also be encountered along the alignment. No desert pavement is located at the Jacumba Substation site.

Mineral Resources. There are no known active mineral resource sites or BLM claims along the alignment. Therefore, there would be no impacts related to accessibility of mineral resources.

Seismicity. The transmission alignment does not cross nor is in close proximity to any active faults and is therefore not likely to be damaged by fault rupture. The site may experience moderate groundshaking from earthquakes on nearby significant active faults, i.e., the Elsinore, or Laguna Salada located east of the alignment. Estimated PGAs along the alignment range from 0.1 g to 0.4g, with the higher PGAs in areas underlain by alluvial deposits. Portions of the site alignment are underlain by Quaternary alluvium and would likely be susceptible to liquefaction-related phenomena in areas underlain by saturated sandy deposits. The alignment crosses numerous hills, valleys, and plateaus across the Jacumba Mountains, and although most of this portion of the alignment is underlain by igneous and metamorphic bedrock, earthquake triggered rock falls and shallow landslides could occur.

SDG&E 69 kV Transmission Line

Geology. The 69 kV transmission line crosses hills and valleys of the Jacumba Mountain and is primarily underlain by Quaternary alluvium (Qal) and La Posta Diorite (gr⁺). A general description of the characteristic of this unit is presented in Section D.13 in Table D.13-1.

Slope Stability. The alignment traverses hills, mesas, and valleys of the Jacumba and In-Ko-Pah Mountains. A large portion of the alignment cross moderately sloping hills and valleys, these areas are underlain primarily by granitic and volcanic units which are not typically prone to landslides. Excavation and grading for the project would potentially trigger rock-falls or shallow soil slides.

Soils. The 69 kV transmission line traverses at least three soil associations; the Indio-Gilman-Coachella (s992), (s1014) Tollhouse-Rock Outcrop-La Posta, and the (s1016) Sheephead-Rock Outcrop-Bancas association. Hazard of erosion for these soils for off-road/off-trail ranges from slight to moderate and for on on-road/on-trail ranges from slight to severe. Shrink/swell (expansive) potential of the soils associations along this alignment varies from low to moderate. Corrosive potential of soils along the alignment is high for uncoated steel and ranges from low to moderate for concrete. The basic characteristics of these soil associations are presented in Table D.13-2. Other similar soils may also be encountered along the alignment. No desert pavement is located along the transmission line ROW.

Mineral Resources. There are no known active mineral resource sites or BLM claims along the alignment. Therefore, there would be no impacts related to accessibility of mineral resources.

Seismicity. The transmission alignment does not cross nor is in close proximity to any active faults and is therefore not likely to be damaged by fault rupture. The site may experience moderate groundshaking from earthquakes on nearby significant active faults, i.e., the Elsinore, or Laguna Salada located east of the alignment.

SDG&E Boulevard Substation Expansion

Geology. The substation site has little slope and is primarily underlain by Quaternary alluvium (Qal) and La Posta Diorite (gr₄). A general description of the characteristic of this unit is presented in Section D.13 in Table D.13-1.

Slope Stability. The substation would be constructed on $\frac{3}{4}$ acres of already disturbed land that with little slope and is not likely to experience slope failure.

Soils. The Boulevard Substation Expansion site traverses primarily one soil association; the (s1016) Sheephead-Rock Outcrop-Bancas association. Hazard of erosion for these soils for off-road/off-trail ranges from slight to moderate and for on on-road/on-trail ranges from slight to severe. Shrink/swell (expansive) potential of the soils associations along this alignment varies from low to moderate. Corrosive potential of soils along the alignment is high for uncoated steel and ranges from low to moderate for concrete. The basic characteristics of these soil associations are presented in Table D.13-2. Other similar soils may also be encountered along the alignment. No desert pavement is located at the Boulevard Substation site.

Mineral Resources. No known mineral resources exist at or adjacent to the Boulevard Substation Expansion site. Therefore, construction and operation of the substation is not expected to interfere with future access to any mineral resources.

Seismicity. The substation site does not cross nor is in close proximity to any active faults and is therefore not likely to be damaged by fault rupture. The site may experience moderate groundshaking from earthquakes on nearby significant active faults, i.e., the Elsinore, or Laguna Salada located east of the alignment.

SDG&E Communication Facility

White Star Communication Tower. The White Star communication tower is underlain primarily by La Posta Diorite (gr₄). The construction would occur on an already existing communication tower site and it not likely to experience slope failure. The White Star communication tower is located on one soil association; the (s1014) Tollhouse-Rock Outcrop-La Posta. Hazard of erosion for these soils for off-road/off-trail ranges is moderate and for on on-road/on-trail is severe. Shrink/swell (expansive) potential of the soils associations along this alignment varies from low to moderate. Corrosive potential of soils along the alignment is moderate for uncoated steel and moderate for concrete. Other similar soils may also be encountered along the alignment. No known mineral resources exist at or adjacent to the White Star communication tower site. Therefore, construction and operation of the substation communication tower is not expected to interfere with future access to any mineral resources. The communication tower substation site does not cross nor is in close proximity to any active faults and is therefore not likely to be damaged by fault rupture. The site may experience moderate groundshaking from earthquakes on nearby significant active faults, i.e., the Elsinore, or Laguna Salada located east of the alignment.

2.13.2 Environmental Impacts and Mitigation Measures – Geology, Mineral Resources, and Soils

Like the RWD Project and Jacumba Substation analyzed in the Draft EIR/EIS, geology, soils, and mineral resource impacts of the RWEP and the required transmission, substation, and communication components would not result in any significant, unmitigable (Class I) impacts. The impact significance for the RWEP and related facilities would be the same as those for the RWD Project and Jacumba Substation.

Table 2.13-1 shows the level of significance of each geology, soils, and mineral resource impact for the Semptra RWEP and associated components. This table compares the significance of each geology, soils, and mineral resource impact as identified in the January 2008 Sunrise Powerlink Draft EIR/EIS, and as identified in this recirculated Draft EIR/EIS. Detailed discussions of each impact and the specific locations where each impact is identified are presented in the following sections. The complete impact analysis from the January 2008 Sunrise Powerlink Draft EIR/EIS is presented in Appendix 1.

Table 2.13-1. Comparison of Impacts Identified – Geology, Mineral Resources, and Soils

Impact No.	Description	Impact Significance	
		Draft EIR/EIS	Recirculated Draft EIR/EIS
G-1	Erosion would be triggered or accelerated due to construction activities		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II, Class III, No Data Available	Class II, No Data Available
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II
G-3	Project would expose people or structures to potential substantial adverse effects as a result of problematic soils		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II, No Data Available	Class II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II
G-4	Project would expose people or structures to potential substantial adverse effects as a result of seismically induced groundshaking and/or ground failure		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II	Class II, Class III
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II, Class III
G-6	Project would expose people or structures to potential substantial adverse effects as a result of slope instability created during excavation and/or grading		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II	Class II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II
G-7	Project would expose people or structures to potential substantial adverse effects as a result of landslides, earthflows, debris flows, and/or rockfall		
	Wind Project in Mexico, Transmission Line to U.S.	Class II	Class II, No Impact
	Jacumba Substation	No Impact	No Impact
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II, No Impact

Significance Criteria. The criteria used to assess the significance of geology, mineral resources, and soils impacts resulting from the Semptra Presidential Permit and related facilities are the same as the significance criteria for the Sunrise Powerlink. The significance of these impacts was determined on the basis of NEPA and CEQA statutes, guidelines and appendices, thresholds of significance developed by local agencies, government codes and ordinances. Impacts of the project on the geologic environment would be considered significant if project construction or operation would result in any of the following criteria being met:

- Project construction would trigger or accelerate erosion or the loss of topsoil.
- Project construction would result in the direct or indirect destruction or disturbance of landforms or unique geologic features.
- The Proposed Project would render known mineral and/or energy resources inaccessible.

Geologic impacts created as a result of the Proposed Project are significant if damage to project components from the following scenarios would potentially expose people or structures to substantial adverse effects, including the risk of loss, injury, or death:

- Project components would be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landsliding, slope instability, subsidence, or collapse.
- Project components could be damaged if located on unsuitable soils, including corrosive, expansive, and compressible soils.
- Damage to project components due to seismic events (earthquakes), including fault rupture, and seismically induced groundshaking that results in landslides, liquefaction, settlement, lateral spreading, and/or surface cracking.

Construction Impacts

No impacts associated with this project would occur to desert pavement as there is no desert pavement within the Jacumba and La Rumorosa regions (Impact G-2). No impacts associated with this project would occur from construction activities interfering with access to known mineral resources (Impact G-7).

Impact G-1: Erosion would be triggered or accelerated due to construction activities (Class II, No Data)

Sempra RWEP (Mexico) (No Data Available). While no data is available for the severity of the soil erosion hazard in the La Rumorosa area in Mexico, along the U.S.-Mexico border it can be assumed that the soil erosion hazard would be similar to the parcel within the United States. Additionally, because of the large acreage of construction, up to 2,125 acres of permanent impact, and the steep slope of the Sierra de Juárez, soil erosion impacts would be significant. Activities likely to result in soil erosion include the installation of tower foundations which would involve excavations to depths up to 40 feet below grade, contour grading that would be conducted at each turbine pad, and trenching for the installation of turbine and switchyard interconnection systems. Available mitigation includes limiting grading of existing roads in areas with sensitive soils; using of Best Management Practices (BMPs) such as sand bags and road bars, to control water erosion; and limiting construction traffic to minimize erosion. In addition, a Stormwater Pollution Prevention Plan (SWPPP) that would limit erosion from the construction site would be required in accordance with the Clean Water Act. Implementation of such measures would result in a less than significant impact.

SDG&E Jacumba Substation, Sempra Baja Wind Transmission Line (Mexico to U.S.), SDG&E 69 kV Transmission Line, SDG&E Boulevard Substation Expansion, SDG&E Communication Facility (Class II). Excavation and grading for Jacumba Substation, associated transmission lines, Boulevard Substation Expansion, and the White Star communication tower would loosen soil and accelerate erosion. While no data is available for the severity of the soil erosion hazard in the La Rumorosa area in Mexico, along the U.S.-Mexico border it can be assumed that the soil erosion hazard would be similar to the parcel within the United States, which is slight to moderate. The acceleration of erosion caused by the construction of the projects would be a significant impact.

Mitigation would include limiting grading of existing roads in areas with sensitive soils; using of Best Management Practices (BMPs) such as sand bags and road bars, to control water erosion; and limiting construction traffic to minimize erosion. In addition, a Stormwater Pollution Prevention Plan (SWPPP) that would limit erosion from the construction site would be required in accordance with the Clean Water Act. Implementation of such Mitigation Measures G-1a and G-1d would result in a less than significant impact (Class II).

[The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measures for Impact G-1: Erosion would be triggered or accelerated due to construction activities

G-1a **Limit modification of access roads.** [GEO-APM-1]

G-1d **Restore surfaces for erosion control and revegetation.** [GEO-APM-6]

Impact G-6: Project would expose people or structures to potential substantial adverse effects as a result of slope instability created during excavation and/or grading (Class II)

All Components (Class II). Destabilization of natural or constructed slopes would potentially occur as a result of construction activities due to excavation and/or grading operations. Construction consisting of grading and excavation within the hillsides forming the RWEP area would potentially cause slope instability, triggering rock-falls or landslides. Slope instability including landslides, earth flows, and debris flows has the potential to undermine foundations, cause distortion and distress to overlying structures, and displace or destroy project components. This would be a significant impact.

The potential for excavation or grading to cause slope instability is mitigable to less than significant levels (Class II). Available mitigation includes avoiding placing structures in unstable areas, and removing or stabilizing boulders upslope of structures thus reducing the threat of possible slope failures or rock falls. Mitigation Measure G-3b, G-6a, and G-6b are recommended. [The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measures for Impact G-6: Project would expose people or structures to potential substantial adverse effects as a result of slope instability created during excavation and/or grading

G-3b **Avoid structure placement in high shrink/swell areas.** [GEO-APM-3]

G-6a **Conduct geotechnical surveys for landslides and protect against slope instability.**

G-6b **Place structures in stable areas.** [GEO-APM-4]

Operational Impacts

Impact G-5 (Transmission line and tower structures could be damaged by surface fault rupture at crossings of active faults) would not occur because the RWEP components do not cross any known active faults.

Impact G-3: Project would expose people or structures to potential substantial adverse effects as a result of problematic soils (Class II)

All Components (Class II). Soils near the RWEP site, the associated transmission lines, and the Jacumba and Boulevard Substations have a high potential for corrosion to uncoated steel and a low to moderate potential for corrosion to concrete. Expansion potential for the soils varies from low to moderate. The potential to encounter corrosive and expansive subsurface soils ranges from low to high in the affected areas of the wind project components which would potentially damage project structures. Collapse of project structures would potentially result in power outages, damage to nearby roads or

structures, and injury or death to nearby people. This would be a significant impact. No data is available for the potential of the soils comprising the RWEP site in Mexico for corrosion to uncoated steel and for corrosion to concrete, however along the U.S.-Mexico border, it can be assumed that the corrosion and expansion potential would be similar to that within the United States.

The potential for project structures to be damaged by problematic soils is mitigable to less than significant levels (Class II) through application of standard design and construction practices and implementation of mitigation. Mitigation includes application of standard design and construction practices, and reducing the adverse affects of problematic soils by avoiding placement of structures in areas of high shrink/swell potential, to the extent feasible. Mitigation Measure G-3a is also recommended.

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact G-3: Project would expose people or structures to potential substantial adverse effects as a result of problematic soils

G-3a Conduct geotechnical studies for soils to assess characteristics and aid in appropriate foundation design.

G-3b Avoid structure placement in high shrink/swell areas. [GEO-APM-3]

Impact G-4: Project would expose people or structures to potential substantial adverse effects as a result of seismically induced groundshaking and/or ground failure (Class II, Class III)

All Components (Class II and Class III). The Jacumba Substation, transmission lines, Boulevard Substation Expansion and RWEP site would experience moderate groundshaking in the event of a large earthquake on major faults in the region. Seismically induced groundshaking would potentially damage project structures. Collapse of project structures would potentially result in power outages, damage to nearby roads or structures, and injury or death to nearby people. This would be a significant impact. Appropriate transmission line design accounting for lateral wind loads would likely exceed any creditable seismic loading from moderate groundshaking, thus minimizing potential damage to structures from groundshaking related to earthquakes on faults in the region of the project components. This would result in a less than significant impact (Class III). Appropriate turbine design accounting for lateral wind loads would likely exceed any creditable seismic loading from moderate groundshaking, thus minimizing potential damage to turbine structures from groundshaking related to earthquakes on faults in the region of the RWEP site. This would result in a less than significant impact (Class III).

Moderate groundshaking would potentially result in seismically induced ground failures, including liquefaction and slope failures in the project area. Potential for liquefaction is primarily isolated to areas near creeks and washes underlain by young alluvial and lacustrine deposits which could liquefy during an earthquake if perched groundwater were present. The RWEP is located over an underground basin is bordered on the east side by the Sierra de Juárez Mountains and on the west by the Sierra Cucapah. These conditions create areas where drainage is poor and lagoons are formed as none of the rivers in this region can reach the Gulf of California. Seismically induced slope failures such as landslides and rockfalls would potentially occur along the moderate to steep slopes that comprise the RWEP site. This would result in damage to project structures. Collapse of project structures would potentially result in power outages, damage to nearby roads or structures, and injury or death to nearby people. This would be a potentially significant impact.

The potential for project structures or people to be harmed by seismically induced groundshaking and/or ground failure is mitigable to less than significant levels (Class II). Mitigation includes placement of structures in geologically stable areas and avoidance of fault lines where feasible. Mitigation Measures G-4a, G-4b, G-5a, and G-6a are also recommended.

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact G-4: Project would expose people or structures to potential substantial adverse effects as a result of seismically induced groundshaking and/or ground failure

- G-4a Reduce effects of groundshaking.
- G-4b Conduct geotechnical investigations for liquefaction.
- G-5a Minimize project structures within active fault zones.
- G-6a Conduct geotechnical surveys for landslides and protect against slope instability.

*Impact G-7: Project would expose people or structures to potential substantial adverse effects as a result of landslides, earthflows, debris flows, and/or rockfall **(No Impact, Class II)***

Sempra RWEF (Mexico). (Class II) Slope instability including landslides, earth flows, debris flows, and rock fall has the potential to undermine foundations, cause distortion and distress to overlying structures, and displace or destroy associated project components. Given the moderate to steep slopes that comprise the RWEF area, slope instability presents a significant impact.

The potential for project structures to be damaged by landslides, earthflows, debris flows, and/or rock fall is mitigable to less than significant levels (Class II). Mitigation includes ensuring that project structures are located outside of areas with unstable slopes and that boulders are removed from slopes or stabilized. Mitigation Measure G-3b and G-6a are recommended.

SDG&E Jacumba Substation, Sempra Baja Wind Transmission Line (Mexico to U.S.), SDG&E Boulevard Substation Expansion (No Impact). There would be no impacts associated with Jacumba or Boulevard Substations and 230 or 500 kV transmission line due to landslides, earthflows, debris flows and/or rock fall during project operation. There is limited slope within the alluvial wash upon which the Substation and transmission line would be sited.

SDG&E 69 kV Transmission Line (Class II). Slope instability including landslides, earth flows, debris flows, and rock fall has the potential to undermine foundations, cause distortion and distress to overlying structures, and displace or destroy associated project components. Given the moderate to steep slopes that comprise the 69 kV transmission line ROW region, slope instability presents a significant impact.

The potential for project structures to be damaged by landslides, earthflows, debris flows, and/or rock fall is mitigable to less than significant levels (Class II). Mitigation includes ensuring that project structures are located outside of areas with unstable slopes and that boulders are removed from slopes or stabilized. Mitigation Measure G-3b and G-6a are recommended.

SDG&E Communication Facility (No Impact). There would be no impacts associated with the White Star communication tower due to landslides, earthflows, debris flows and/or rock fall during project operation because there is a limited slope at the White Star communication tower site.

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measure for Impact G-7: Project would expose people or structures to potential substantial adverse effects as a result of landslides, earthflows, debris flows, and/or rockfall

- G-3b Avoid structure placement in high shrink/swell areas. GEO-APM-3]
- G-6a Conduct geotechnical surveys for landslides and protect against slope instability.

2.14 Socioeconomics, Services, and Utilities

2.14.1 Environmental Setting

Sempra RWEP (Mexico)

The RWEP would be situated within one mile of the town of La Rumorosa in the municipality of Tecate. Jurisdictions in the vicinity of the project include the city of La Rumorosa, the municipality of Tecate, and the state of Baja California.

Demographics and Housing. The municipality of Tecate consists of five incorporated cities and a number of unincorporated communities. It has approximately 91,000 people, and a population density of roughly 60 people per square mile, although in actuality 75% of the population of Tecate lives in the capital city of Tecate (Tecate Government, 2007). Table 2.14-1 identifies the Demographic Characteristics of the La Rumorosa region.

Table 2.14-1. Demographic Characteristics – RWEP (Mexico)

Location	2005 Estimated Population	2005 Estimated Housing Units	2005 Estimated Employed
Tecate	91,034	22,003	Labor Force: 27,078 persons Construction Occupations: 7.3% Unemployed: 295 persons
La Rumorosa	1615	465	

Source: Mexico Census, 2005.

Public Services and Utilities. The Department of Fire and Civil Safety is located in the city of Tecate and is the primary law enforcement agency in the municipality of Tecate. This Department has five divisions, Administrative Department, the Technical Department, Department of Operations, and the Department of Civil Protection. The town of La Rumorosa has three schools, the Secundaria Técnica Rafael Ramírez, the primary school Benito Juárez, and the primary school Dr. Aubanel Vallejo.

The existing utility providers in the La Rumorosa region are the Comisión Federal de Electricidad (CFE). The electricity for this region comes primarily from the two La Rosita power plants and travels along the existing 230 kV Tijuana/Mexicali transmission line. The La Rumorosa Substation is located approximately 6 miles to the east of the town of La Rumorosa.

Jacumba Substation and the Baja Wind Transmission Line (Mexico to U.S.)

The Jacumba Substation and the 230 or 500 kV transmission would include a 500/230/69 kV substation and a 3-mile long transmission line connecting the RWEP to the Jacumba Substation. The Jacumba Substation and approximately 1 mile of the transmission line within the United States would be sited on private land. Please see the environmental setting for the RWEP for details about the Mexican region of this project.

Jurisdictions along this route include Caltrans, Department of Homeland Security (Border Patrol), San Diego County Water Authority (SDCWA), and the County of San Diego.

The 2005 estimated population of San Diego County was 2,824,259. The estimated housing units were 1,113,207 with a vacancy rate of 6.5% (72,669 units). The estimated employment was 1,414,090 persons with 120,693 persons estimated to work in construction occupations, and an estimated 75,361 persons unemployed (SDG&E, 2006 and U.S. Census 2000: 2005). Public services' and utilities providers' information for San Diego County is described in Table 2.14-2 below.

Table 2.14-2. Utility and Service Providers – San Diego County

<p>Natural Gas & Electricity – SDG&E</p> <p>Water – San Diego County Water Authority (SDCWA) (from Metropolitan Water District of California)</p> <p>Wastewater – County of San Diego Department of Public Works, Wastewater Management Section</p> <p>Telecommunications – SBC and Cox Communications</p> <p>Fire Protection – San Diego Rural Fire Protection District, California Department of Forestry and Fire Protection, U.S. Marine Corps Air Station Miramar Fire Department, and U.S. Department of Agriculture Forest Service</p> <p>Police Protection – San Diego County Sheriff's Department and California Highway Patrol</p> <p>Schools (in vicinity of Proposed Project) – None</p> <p>Hospitals (along Proposed Project route) – None</p>	<p>Solid Waste (Landfills) – WMI, Escondido Disposal Corporation, Pacific Waste Services, Allan Company, Daily Disposal Services, Inc., Debris Box, Dependable Disposal and Recycling, Emerald Waste and Recovery, Inc., Express Waste and Roll-Off Services, John Smith Earthworks, Inc., Tayman Industries, Ware Disposal Company, Inc., Coast Waste Management, Inc., Jones Disposal, Inc., Reliable Waste, Inc., Waste Management of North County, Inc., Waste management of San Diego, Sonny DiVello's All American Disposal, Inc., King Business Services, Inc, Shubin Services, Inc., Solag Disposal, Inc., Ware Disposal Company, Inc., and Diamond Environmental (Landfills include Ramona Landfill, Sycamore Sanitary Landfill, and Las Pulgas Landfill)</p>
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Source: SDG&E, 2006.

The Jacumba Substation would be located approximately 700 feet south of the existing SDG&E Southwest Powerlink (SWPL) Imperial Valley–Miguel 500 kV transmission line.

69 kV Transmission Line (Jacumba Substation to Boulevard Substation)

The 69 kV transmission line would connect the Jacumba Substation with the Boulevard Substation. It would pass north of Jacumba, population 695, and pass through Boulevard, population 1,946. Jurisdictions along this route include Caltrans, Department of Homeland Security (Border Patrol), San Diego & Arizona Eastern Railway, San Diego County Water Authority (SDCWA), and the County of San Diego. Demographics, housing, and public services' and utilities providers' information for the County of San Diego would be the same as for the Jacumba Substation described above. The 69 kV transmission line would parallel and cross the existing SDG&E Southwest Powerlink (SWPL) Imperial Valley–Miguel 500 kV transmission line (MP BL-0 to MP BL-9.4).

Boulevard Substation Expansion

The Boulevard Substation Expansion would be constructed within the existing Boulevard Substation property and would potentially include the neighboring private property. It would be sited in Boulevard, population 1,946. Jurisdictions along this site include Caltrans, Department of Homeland Security (Border Patrol), and the County of San Diego. Demographics, housing, and public services' and utilities providers' information for the County of San Diego would be the same as for the Jacumba Substation described above.

SDG&E Communication Facility

The White Star Communication tower would be located in the existing White Star communication tower property. It would be sited in Boulevard, population 1,946. Jurisdictions along this site include the County of San Diego. Demographics, housing, and public services' and utilities providers' information for the County of San Diego would be the same as for the Jacumba Substation described above.

2.14.2 Environmental Impacts and Mitigation Measures – Socioeconomics and Utilities

Like the RWD Project and Jacumba Substation analyzed in the Draft EIR/EIS, socioeconomics and utilities impacts of the RWEP and the required transmission, substation, and communication components would not result in any significant, unmitigable (Class I) impacts. The impact significance for the RWEP and related facilities would be similar to those for the RWD Project and Jacumba Substation; however the RWD Project has one additional impact that would require mitigation to be less than significant.

Table 2.14-3 shows the level of significance of each socioeconomics and utilities impact for the Sempra RWEP and associated components. This table compares the significance of each socioeconomics and utilities impact as identified in the January 2008 Sunrise Powerlink Draft EIR/EIS, and as identified in this recirculated Draft EIR/EIS. Detailed discussions of each impact and the specific locations where each impact is identified are presented in the following sections. The complete impact analysis from the January 2008 Sunrise Powerlink Draft EIR/EIS is presented in Appendix 1.

Table 2.14-3. Comparison of Impacts Identified – Socioeconomics, Services, and Utilities

Impact No.	Description	Impact Significance	
		Draft EIR/EIS	Recirculated Draft EIR/EIS
S-1	Project construction and/or transmission line presence would cause a change in revenue for businesses, tribes, or governments		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class III, Class IV	Class III, Class IV
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class III, Class IV
S-2	Construction would disrupt the existing utility systems or cause a co-location accident		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II Class III	Class III Class III
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II
S-3	Project construction and operation would increase the need for public services and facilities		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II, Class III, No Data Available	Class II, No Data Available
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class III
S-4	Property tax revenues and/or fees from project presence would substantially benefit public agencies		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class IV	Class IV
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class IV
S-5	Presence of the project would decrease property values		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class III	Class III, No Data Available
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class III

Significance Criteria. The criteria used to assess the significance of socioeconomic impacts resulting from the Sempra Presidential Permit and related facilities are the same as the significance criteria for the Sunrise Powerlink. Socioeconomic, public services and utilities impacts would be considered significant if the Proposed Project would:

1. Cause a substantial change in revenue for local businesses, government agencies, or Indian tribes;
2. Disrupt existing utility systems or cause a collocation accident;
3. Require the construction of new public service facilities or require the expansion of existing facilities to accommodate an increased need for fire protection, police protection, schools, or other public services, including water, wastewater and/or solid waste facilities;
4. Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere;
5. Cause substantial change in local employment or labor force;
6. Conflict with applicable land use plans and policies associated with socioeconomics (including public services or utilities); and/or
7. Cause a substantial decrease in property values.

Construction Impacts

Impact S-1: Project construction and/or transmission line presence would cause a change in revenue for businesses, tribes, or governments (Class III, Class IV)

Sempra RWEF (Mexico)

Revenue from Business Operations. Business uses occur along the RWEF site, many of which cater to tourists who visit the La Rumorosa region for ecotourism and historical purposes. The project, however, would not require the removal or relocation of any business uses. Impacts on local businesses would be similar to those in the U.S. region described above (Class III).

Economic Benefit. Employment of construction personnel would be beneficial to local businesses and the regional economy through increased expenditure of wages for goods and services. Personnel for construction would be most likely drawn from local populations in San Diego County. A limited number of construction personnel would require temporary housing, likely in local hotels, and would purchase food, beverages, and other commodities, which would provide economic benefit to the local economy (Class IV).

Additionally, the ejidos Jácume and Cordillera Molina signed a 30-year land lease contract with Sempra that would be beneficial to local income. The communities received a payment upon signing the land lease contract, and will receive further payment once the wind project is operating (elVigía, 2008). This additional income would provide economic benefit to the local communities (Class IV).

SDG&E Jacumba Substation and Sempra Baja Wind Transmission Line (Mexico to U.S.)

Revenue from Business Operations. A few business uses occur north of the Jacumba Substation and 230 or 500 kV transmission line, especially near the Interstate 8, but the project would not require the removal or relocation of any business uses. Impacts on local businesses could result from degradation of views, views of construction equipment and activity, vehicular or pedestrian access restrictions, land

use, air quality, and noise effects, or health and safety concerns (such as EMF). These issues are analyzed in this document in Sections 2.3 (Visual Resources), 2.4 (Land Use), 2.8 (Noise), 2.9 (Traffic/Transportation), and 2.10 (Public Health and Safety). Where impacts for these issue areas are found to be less than significant or have been mitigated to less than significant levels, any associated loss of local business revenue impacts would not be significant. In addition, because these impacts would be short-term construction impacts and no removal of businesses would be required, these impacts would not result in significant revenue impacts (Class III). Therefore, no additional mitigation measures are recommended outside of those presented in Sections 2.3 (Visual Resources), 2.9 (Traffic/Transportation), 2.4 (Land Use), and 2.10 (Public Health and Safety) to mitigate potential impacts that could result in a substantial change to local business revenues.

Economic Benefit. Employment of construction personnel would be beneficial to local businesses and the regional economy through increased expenditure of wages for goods and services. Personnel for construction would be drawn from local populations in San Diego County, creating new temporary and permanent employment in this county. A limited number of construction personnel would require temporary housing, likely in local hotels, and would purchase food, beverages, and other commodities, which would provide economic benefit to the local economy (Class IV).

SDG&E 69 kV Transmission Line, SDG&E Boulevard Substation Expansion, SDG&E Communication Facility

Revenue from Business Operations. A few business uses occur along the 69 kV transmission line and Boulevard Substation Expansion especially near Jacumba and in Boulevard. The project would not require the removal or relocation of any business uses. Impacts on local businesses could result from degradation of views, views of construction equipment and activity, vehicular or pedestrian access restrictions, land use, air quality, and noise effects, or health and safety concerns (such as EMF). These issues are analyzed in this document in Sections 2.3 (Visual Resources), 2.4 (Land Use), 2.8 (Noise), 2.9 (Traffic/Transportation), and 2.10 (Public Health and Safety). Where impacts for these issue areas are found to be less than significant or have been mitigated to less than significant levels, any associated loss of local business revenue impacts would not be significant. In addition, because these impacts would be short-term construction impacts and no removal of businesses would be required, these impacts would not result in significant revenue impacts (Class III). Therefore, no additional mitigation measures are recommended outside of those presented in Sections 2.3 (Visual Resources), 2.9 (Traffic/Transportation), 2.4 (Land Use), and 2.10 (Public Health and Safety) to mitigate potential impacts that could result in a substantial change to local business revenues.

Economic Benefit. Employment of construction personnel would be beneficial to local businesses and the regional economy through increased expenditure of wages for goods and services. Personnel for construction would be drawn from local populations in San Diego County, creating new temporary and permanent employment in this county. A limited number of construction personnel would require temporary housing, likely in local hotels, and would purchase food, beverages, and other commodities, which would provide economic benefit to the local economy (Class IV).

Impact S-2: Construction would disrupt the existing utility systems or cause a co-location accident (Class II, Class III)

Sempra RWEF (Mexico), SDG&E Jacumba Substation, and Sempra Baja Wind Transmission Line (Mexico to U.S (Class III). Given the remote location of the wind project and these components, the potential for construction to disrupt the existing utility systems is unlikely. The nearest utility lines to the RWEF facilities would be approximately 1,000 feet away in the town of La Rumorosa. The nearest

utilities to the Jacumba Substation and the Sempra Baja Wind Transmission would be the existing SWPL transmission line. The SWPL transmission line is owned and operated by SDG&E and thus crews are familiar with the line. Work is routinely performed within the transmission line ROW and in the event that any accidental damage was to occur, operational employees are trained to respond and minimize/avoid any potential service interruptions by transferring load. Electrical systems are designed with redundant means to provide service. Therefore, because back-up means of preventing service interruptions in the event of an accident are in place at the substation, impacts to existing utilities would be less than significant (Class III) and no mitigation measure is required.

SDG&E 69 kV Transmission Line, SDG&E Boulevard Substation Expansion, SDG&E Communication Facility (Class II). Construction of the 69 kV transmission line and the Boulevard Substation Expansion would occur in proximity to residential areas. Construction activities may disrupt existing buried utilities during excavation in the event of a construction accident. Therefore, there would be potential for service interruptions to water, gas, or buried electrical distribution lines during construction of the project. The potential for construction to disrupt the existing utility systems is considered to be mitigable to less than significant levels (Class II). Implementation of Mitigation Measures S-2a through S-2c would reduce this impact to less than significant. The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact S-2: Construction would disrupt the existing utility systems or cause a co-location accident

- S-2a **Notify public of utility service interruption.**
- S-2b **Protect underground utilities.**
- S-2c **Coordinate with utility providers. [PSU-APM-1, PSU-APM-2]**

Impact S-3: Project construction would increase the need for public services and facilities (Class II, Class III)

Sempra RWEF (Mexico) (Class II)

Water. Water would be required during construction of the RWEF wind project for dust abatement, ~~and~~ cleaning construction equipment, and possibly for irrigating revegetated areas post-construction. The amount of water required depends on the length of access roads used, weather conditions, road surface conditions, and other site-specific conditions. Dust suppression efforts would occur on each day that grading activities take place and on unpaved access roads. Water consumption for this purpose would also vary depending on the implementation of the air quality Mitigation Measure AQ-1a (Implement Fugitive Dust Control Plan) that specifies the use of soil binders on unpaved roads, staging areas, and parking areas, which would substantially minimize water use. Non-potable water would be used for dust control when available. Water would also be needed to make the concrete used during project construction. Comparatively small amounts of potable water would be needed for sanitary and drinking purposes.

Once constructed, the RWEF would require small amounts of water for maintenance activities. Water use during RWEF construction and for post-construction revegetation, should it be required, would be a small fraction of the total water supply for the entire Tecate jurisdiction. However, the Tecate Municipality is already under water strain. Because Tecate is already under water strain, the use of water for construction and operation would be a significant impact. Implementation of Mitigation Measure S-3b (Use reclaimed water.) would ensure the impact is less than significant (Class II). The applicant would need to coordinate the use of reclaimed water with the proper Mexican authorities. Additionally, the applicant would be subject to any rules and regulations concerning water usage within the Tecate region.

Solid Waste. A percentage of excavation would be clean and dry, and would be spread along the construction ROW. Under this project there would be no structure removal. Although a landfill does exist in La Rumorosa, it has limited space and limited contamination treatment. The closest viable landfills near the RWEP include those in the City of Tecate and in the City of Mexicali, and the waste generated would be subject to the rules and regulations according to the Department of Public Cleanliness (Departamento de Aseo Público) for each city (Mexicali Government, 2007; Tecate Government, 2007). Exact data as to the capacity of these landfills is unknown, as this information is not published on the municipal websites. The exact amount of material recycling is also unknown, and therefore the total amount of waste requiring landfill disposal is unknown. Recycling activities would, however, greatly reduce the quantity of construction-related materials transported to local landfills.

Public Services. Neither construction nor operation of the RWEP in Mexico is expected to result in a direct increase in the local population, leading to long-term demands to local public services as described above in the U.S. section. There would be no impacts to public services.

SDG&E Jacumba Substation, Sempra Baja Wind Transmission Line (Mexico to U.S.), SDG&E 69 kV Transmission Line, SDG&E Boulevard Substation Expansion, SDG&E Communication Facility (Class III for water and sewer, solid waste, and public services)

Water. Water would be required during construction of the Jacumba Substation, transmission lines, Boulevard Substation Expansion, and the White Star communication tower for dust abatement and cleaning construction equipment. The amount of water required depends on the length of access roads used, weather conditions, road surface conditions, and other site-specific conditions. Dust suppression efforts would occur on each day that grading activities take place and on unpaved access roads. Water consumption for this purpose would also vary depending on the implementation of the air quality Mitigation Measure AQ-1a (Implement Fugitive Dust Control Plan) that specifies the use of soil binders on unpaved roads, staging areas, and parking areas, which would substantially minimize water use. Non-potable water would be used for dust control when available. Water would also be needed to make the concrete used during project construction. Comparatively small amounts of potable water would be needed for sanitary and drinking purposes.

Once constructed, the components would require small amounts of water for maintenance activities. Water use during project construction would be a small fraction of the total water supply for the jurisdictions affected by the project and would not change the ability of the water suppliers identified previously in serving the project area demands

Solid Waste. A percentage of excavation would be clean and dry, and would be spread along the construction ROW. Under this project there would be no structure removal. The closest landfills near the Jacumba Substation, transmission lines, and Boulevard Substation Expansion in the United States include the (CIWMB, 2007):

- Allied Imperial Landfill (104 East Robinson Road, Imperial) that allows a maximum permitted throughput of 1,135 tons/day and has a remaining capacity of 2,105,500 cubic yards
- Imperial Solid Waste Site (1705 West Worthington Road, Imperial) that allows a maximum permitted throughput of 207 tons/day and has a remaining capacity of 183,871 cubic yards

Due to the number and capacity of landfills serving the project area, capacity for materials generated from construction would be available. Because the exact amount of material recycling is unknown, the total amount of waste requiring landfill disposal is unknown. Recycling activities would greatly reduce the quantity of construction-related materials transported to local landfills. Please see the environmental setting for the RWEP for the 2-mile portion of the 230 or 500 kV transmission line in Mexico.

As the waste generated by construction would occur over an extended period and would be dispersed among the various landfills serving the project area, the daily waste exported offsite would be a fraction of the maximum daily throughput for any of the landfills listed above and the landfills have adequate remaining capacity. Construction waste generated by the project would not substantially affect the remaining capacities of local landfills to serve local demands (Class III). Although impacts to solid waste facilities would not be significant (Class III) and no mitigation measure is required, to further reduce adverse effects of the cumulative volume of waste, Mitigation Measure S-3a is recommended for implementation to ensure that maximum recycling activities would occur.

Public Services. Neither construction nor operation of the Jacumba Substation, transmission lines, Boulevard Substation Expansion, or White Star communication tower is expected to result in a direct increase in the local population, leading to long-term demands to local public services (see also Section H [Growth-Inducing Effects] for a complete discussion of population impacts). The project is not expected to result in any long-term requirements that would place a permanent increased demand on emergency service providers that would result in new or expanded facilities. The temporary addition of construction personnel would not substantially increase any demands on schools or hospitals or lower the level of service for fire protection or police protection in the long-term.

However, as described in Section 2.15 (Fire and Fuels Management), temporary construction activities would result in an increase in potential fire hazards and could increase temporary demands for fire protection services. Although not discussed here, available mitigation includes coordinating construction ~~schedules, lane closures, and other~~ activities with installation of the project with ~~emergency and police~~ fire protection services to ensure that disruption to response times and access ~~is are~~ minimized. Preparation of a ~~project specific Fire Prevention and Response Plan (FPRP) Fire Plan for construction and operation (as proposed in HS-APM-11 and modified in Mitigation Measures F-1a and F-1b), which would be reviewed by pertinent regulatory authorities, and coordination for emergency fire suppression (Mitigation Measure F-1c) is are~~ also recommended ~~for Impact F-1 discussed in Section 2.15.~~

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact S-3: Project construction would increase the need for public services and facilities

- AQ-1a** **Implement Fugitive Dust Control Plan.**
- S-3a** **Recycle construction waste.**
- S-3b** **Use reclaimed water.**
- S-3d** **Coordinate construction schedule with emergency services. [PSU-APM-3]**

Operational Impacts

Impact S-4: Property tax revenues and/or fees from project presence would substantially benefit public agencies (Class IV)

Sempra RWEF (Mexico). (Class IV) Local property tax revenues and regulations within Mexico are unknown at this time. Therefore any changes to property taxes for the project are also unknown. However, any increase in property tax revenue as a result of the project would result in a beneficial impact to the local economy as a result of tax revenue spending (Class IV). Furthermore, the project would not preclude or limit the operations of any public agency or result in a change in revenue to any public agencies.

SDG&E Jacumba Substation, Sempra Baja Wind Transmission Line (Mexico to U.S.), SDG&E 69 kV Transmission Line, SDG&E Boulevard Substation Expansion, SDG&E Communication Facility (Class IV). Local property tax revenues are a function of tax rates charged within the affected jurisdictions. Property taxes for the project sites are expected to increase as a result of the Jacumba Substation, transmission lines, Boulevard Substation Expansion, and White Star communication tower. The State of California Board of Equalization (BOE) assesses infrastructure facilities annually. Dispersion of property tax revenue is determined at a local level based upon the location of the taxable property. Any increase in property tax revenue as a result of the projects would result in a beneficial impact to the local economy as a result of tax revenue spending. Please see discussion of the RWEP in Mexico for the impact analysis of the 2-mile portion of transmission line in Mexico.

Therefore, the projects would not result in an adverse change in public resource revenue. Furthermore, the project would not preclude or limit the operations of any public agency or result in a change in revenue to any public agencies. Potential changes to public agency revenues as a result of the project are considered a beneficial (Class IV) impact.

Impact S-5: Presence of the project would decrease property values (No Data, Class III)

Sempra RWEP (Mexico) – (No Available Data; U.S.: Class III). The data that would be required to conduct a detailed analysis of the RWEP impacts to property values in Mexico are unavailable as they would be based on future property values and on current property values in the region which are unknown. The conclusions of the studies discussed in Section D.14.5 state that overhead transmission lines can, in some instances, reduce the value of nearby properties. However, as discussed in Section D.14.5, incremental effects on property values that may result from overhead transmission lines would be very small, would diminish over time, and would be very difficult to quantify. Based on the studies discussed under Impact S-5 in Section D.14.5, it is likely that the RWEP would not significantly impact property values. Impacts resulting from the presence of wind towers/turbines would be expected to be similar.

Although much of the land north of RWEP is BLM land, RWEP would be visible from private land around the community of Jacumba within the United States and would result in significant and unmitigable visual impacts, even though the project would be several miles to its south. As discussed in Section D.14.5, impacts on property values may result from visual impacts. These issues and potential visual impacts are analyzed extensively in Section 2.3 (Visual Resources) above. Implementation of mitigation measures in the Visual Resources section, such as Mitigation Measures V-3a (Reduce visual contrast of towers and conductors) and other visual resources mitigation specific to Key Viewpoints within the United States, would reduce the visual impacts of the project.

Even in areas where there would be potentially significant impacts (e.g., visual resources), the numerous studies discussed in Section D.14.5 of the EIR/EIS conclude that these effects are usually smaller than anticipated and essentially impossible to generally quantify due to the individuality of properties/neighborhoods, differences in personal preferences of individual buyers/sellers, and the weight of other factors that contribute to a person's decision to purchase a property. Other factors (e.g., neighborhood factors, square footage, size of lot, irrigation potential) are much more likely than overhead transmission lines to be major determinants of the sales price of property (Kroll and Priestley, 1992). In addition, across the board, studies have generally concluded that over time, any adverse property value impacts diminish and within five years the change is negligible most likely due to increased screening as trees and shrubbery grow and/or diminished sensitivity to the line proximity in the absence of adverse publicity. As a result, any changes in property values would not be a substantial decrease and this impact is considered to be less than significant to properties within the United States (Class III).

SDG&E Jacumba Substation, Sempra Baja Wind Transmission Line (Mexico to U.S.), SDG&E 69 kV Transmission Line, SDG&E Boulevard Substation Expansion, SDG&E Communication Facility (Class III). During the public scoping process for the proposed SRPL project, the public expressed a great deal of interest and concern regarding the potential impacts of transmission line projects on property values. As such, the discussion of Impact S-5 under the Imperial Valley Link (see Section D.14.5.1) addresses in detail the issues associated with the potential for impacts on property values and industrial facilities such as transmission lines in an effort to provide the reader with detailed background information based on extensive literature review and the property value issues of past similar projects.

The data that would be required to conduct a detailed analysis of the transmission line impacts to property values are unavailable as they would be based on future property values. The conclusions of the studies discussed in detail in Draft EIR/EIS Section D.14.5 state that overhead transmission lines can, in some instances, reduce the value of nearby properties. However, as discussed in Draft EIR/EIS Section D.14.5, incremental effects on property values that may result from overhead transmission lines would be very small, would diminish over time, and would be very difficult to quantify. Based on the studies discussed under Impact S-5 in Section D.14.5, it is unlikely that the project would generate effects that would significantly impact property values. Impacts would be less than significant (Class III).

2.15 Fire and Fuels Management

2.15.1 Environmental Setting – Fire and Fuels Management

Sempra RWEF (Mexico). The RWEF wind project would be situated near the town of La Rumorosa in the municipality of Tecate. The wind project and the southernmost mile of the 230 or 500 kV transmission line would be located upwind of the town of La Rumorosa during a Santa Ana wind event. The Sierra Juárez mountain chain on which the RWEF will be located is a continuation of the Jacumba mountain chain and has a similar physical aspect. Although the Boulevard Fireshed assessment area ends at the U.S.-Mexico border, based on a review of aerial photographs it can be assumed that fuels and topography are similar, sparse desert chaparral.

SDG&E Jacumba Substation, Sempra Baja Wind Transmission Line (Mexico to U.S.), SDG&E 69 kV Transmission Line, SDG&E Boulevard Substation Expansion, SDG&E Communication Facility. The Jacumba Substation and new 230 or 500 kV ROW would be located on the eastern border of the Boulevard Fireshed (AFS-1). The 69 kV ROW between the Jacumba Substation, the Boulevard Substation, and the White Star Communication Facility would be located entirely within AFS-1, the Boulevard Fireshed. Please see Section E.1.15.1 of the January 2008 Draft EIR/EIS for the complete environmental setting of the Boulevard Fireshed. The Boulevard Fireshed assessment area is 72,838 acres in total, and encompasses the southeastern-most corner of San Diego County and contains the easternmost portion of the I-8 alternative route. The fireshed contains the towns of Jacumba, Manzanita, and Boulevard which are all federally designated communities at risk of wildfire.

The community of Jacumba is located downwind (west) of the Substation and the new transmission line during a Santa Ana wind event. Located in the fireshed are the Jacumba Mountains and the In-Ko-Pah Mountains, a BLM Area of Critical Environmental Concern. The wilderness areas in the southernmost portion of ABDSP are also within the fireshed boundary. The elevation ranges from 1,640 feet on the desert floor to 3,880 feet in Boulevard to 4,647 feet on Mt. Tule in the In-Ko-Pah Mountains. This fireshed has an average annual rainfall range between 8 and 14 inches per year. Consequently, much of the area is dominated by sparse, semi-arid vegetation which is often interspersed with granitic boulder outcroppings.

The dominant vegetation type in the Boulevard Fireshed is extremely sparse desert chaparral. The sparse vegetation limits the spread of wildfires started in this area. As a result, the wildfire history indicates that only small portions of the region have burned in wildfire events over the last 50 years. However, cheatgrass and Sahara mustard have started to invade the fireshed; these fire-adapted weeds can quickly spread, altering the plant community and contributing to type-conversion. Exotic grass-dominated landscapes are prone to ignite more easily and spread fires more rapidly than desert vegetation. Please see the environmental setting for the wind project for the 2-mile segment of the 230 or 500 kV transmission line within the La Rumorosa region of Mexico.

2.15.2 Environmental Impacts and Mitigation Measures – Fire and Fuels Management

The RWEF and the required transmission, substation, and communication components would result in two significant, unmitigable (Class I) impacts as compared to the RWD Project and Jacumba Substation analyzed in the Draft EIR/EIS which would result in one significant, unmitigable (Class I) Impacts.

Table 2.15-1 shows the level of significance of each fire and fuels management impact for the Sempra RWEF and associated components. This table compares the significance of each fire and fuels management impact as identified in the January 2008 Sunrise Powerlink Draft EIR/EIS, and as identified in

this recirculated Draft EIR/EIS. Detailed discussions of each impact and the specific locations where each impact is identified are presented in the following sections. The complete impact analysis from the January 2008 Sunrise Powerlink Draft EIR/EIS is presented in Appendix 1.

Table 2.15-1. Comparison of Impacts Identified – Fire and Fuels Management

Impact No.	Description	Impact Significance	
		Draft EIR/EIS	Recirculated Draft EIR/EIS
F-1	Construction and/or maintenance activities would significantly increase the probability of a wildfire		
	Wind Project in Mexico, Transmission Line to U.S.	Class II	Class II
	Jacumba Substation	Class III	Class II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II
F-2	Impact F-2: Presence of the overhead transmission line would increase the probability of a wildfire		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class I	Class I
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class I, No Impact
F-3	Presence of the overhead transmission line would reduce the effectiveness of firefighting		
	Wind Project in Mexico, Transmission Line to U.S.	Class III	Class I
	Jacumba Substation	No Impact	Class I
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class I, No Impact
F-4	Project activities would introduce non-native plants, which would contribute to an increased ignition potential and rate of fire spread		
	Wind Project in Mexico, Transmission Line to U.S., Jacumba Substation	Class II	Class II
	69 kV Transmission Line, Boulevard Substation Expansion, Communication Tower	n/a	Class II

Significance Criteria. The criteria used to assess the significance of fire and fuels management impacts resulting from the Semptra Presidential Permit and related facilities are the same as the significance criteria for the Sunrise Powerlink. Impacts related to wildfires would be considered significant if any of the following were to occur:

- **FIRE-1:** Activities associated with project construction or maintenance significantly increase the probability of a wildfire resulting in damaging impacts to communities, firefighter health and safety, and/or natural resources.
- **FIRE-2:** The presence of the overhead transmission line significantly increases the probability of a wildfire resulting in damaging impacts to communities, firefighter health and safety, and/or natural resources.
- **FIRE-3:** The presence of the project creates obstructions to fire suppression efforts, resulting in damaging impacts to communities and/or natural resources.
- **FIRE-4:** Activities associated with project construction or maintenance result in a fuel vegetation matrix with an increased ignition potential and rate of fire spread.

Construction Impacts

Impact F-1: Construction and/or maintenance activities would significantly increase the probability of a wildfire (Class II)

Sempra RWEP (Mexico) (Class II). Construction activities associated the wind turbines, access roads, and switching station would occur within and immediately outside of the Boulevard Fireshed in rugged terrain in San Diego County, and would include but not be limited to, use of heavy equipment for vegetation removal and grading and excavation for placing underground conduit or steel poles. The use of construction equipment such as earth movers, generators, vehicles, or chainsaws along with the personnel required to construct the facilities introduces the potential for a variety of wildfire ignition sources to surrounding vegetation fuels or combustible materials associated with project construction. Construction-related ignitions have the potential to escape initial attack containment and become catastrophic fires. Because the site has moderate fuels, steep topography, and exposure to Santa Ana winds, it has a moderate to high burn probability and a moderate to high potential for an ignition to escape. Due to the moderate to high fire risk in this area, and because the community of La Rumorosa would be located downwind of the wind project during a Santa Ana event, this impact would be considered significant. However, implementation of Mitigation Measures F-1a through F-1e would reduce this impact to a less than significant level (Class II) as described for the Jacumba Substation and Baja Wind Transmission above.

SDG&E Jacumba Substation, Sempra Baja Wind Transmission Line (Mexico to U.S.) (Class II).

The Jacumba Substation would be located in the Boulevard Fireshed, and the three-mile long transmission line would be located for one mile within the Boulevard Fireshed in the United States and for two miles through similar fuels and topography in Mexico. Construction activities would occur within and immediately outside of the Boulevard Fireshed in San Diego County, and would include but not be limited to, use of heavy equipment for vegetation removal and grading. The use of construction equipment such as earth movers, generators, vehicles, or chainsaws along with the personnel required to construct the facilities introduces the potential for a variety of wildfire ignition sources to surrounding vegetation fuels or combustible materials associated with project construction. Construction-related ignitions have the potential to escape initial attack containment and become catastrophic fires. Because the sites have moderate to low fuel loads, pass through predominantly flat terrain, and are exposed to Santa Ana winds, they have a moderate burn probability and a moderate potential for an ignition to escape.

Due to the moderate fire risk in this area, and because the communities of Jacumba and La Rumorosa are located downwind of the project facilities during a Santa Ana wind event, this impact would be considered significant. However, implementation of Mitigation Measures F-1a through F-1e would reduce this impact to a less than significant level (Class II). Mitigation Measures F-1a, Develop and implement a Construction Fire Plan, and F-1b, Amend and implement Sempra Utilities Wildland Fire Prevention and Fire Safety Guide (2007), would reduce the number of project-related ignitions in this fireshed by requiring personnel training, fire risk management oversight, and open communications with fire agencies. These measures would also reduce the potential impact to communities and natural resources by prohibiting project construction and maintenance activities during Red Flag Warning events, as issued by the National Weather Service, which would eliminate work during extreme fire weather and have the effect of reducing the potential acres burned and the number of homes at risk. Combined with Mitigation Measure F-1e, described below, this measure would reduce the risk of homes sustaining damage in a project construction- or maintenance-related fire.

Mitigation Measure F-1c (Ensure coordination for emergency fire suppression) ensures open communication channels and unobstructed emergency access roads. This measure would reduce firefighting response time in the event of an ignition, which would have the effect of reducing the potential impact to communities and natural resources.

Mitigation Measure F-1d (Remove hazards from the work area), would reduce the severity of construction- and maintenance-related ignitions that escape initial containment efforts by minimizing fuel loads within the corridor. This would reduce the potential impact to communities and natural resources in the event of a project construction- or maintenance-related ignition.

Mitigation Measure F-1e (Contribute to defensible space grants fund) would facilitate firefighting efforts and reduce structure damage at the WUI by making financial contributions toward compliance with defensible space requirements for homeowners most at risk of sustaining structure damage as a result of a project-related wildfire.

SDG&E 69 kV Transmission Line, SDG&E Boulevard Substation Expansion, White Star Communication Facility (Class II). The 69 kV transmission line, Boulevard Substation expansion, and White Star Communication Facility would be located entirely within the Boulevard Fireshed. Construction activities would include but not be limited to, use of heavy equipment for vegetation removal and grading. The use of construction equipment such as earth movers, generators, vehicles, or chainsaws along with the personnel required to construct the facilities introduces the potential for a variety of wildfire ignition sources to surrounding vegetation fuels or combustible materials associated with project construction. Construction-related ignitions have the potential to escape initial attack containment and become catastrophic fires. Because the sites have moderate to low fuel loads, pass through predominantly flat terrain, and are exposed to Santa Ana winds, they have a moderate burn probability and a moderate potential for an ignition to escape. Due to the moderate fire risk in this area, and because the communities of Jacumba and La Rumorosa are located downwind of the project facilities during a Santa Ana wind event, this impact would be considered significant. However, implementation of Mitigation Measures F-1a through F-1e would reduce this impact to a less than significant level (Class II) as described for the Jacumba Substation and Baja Wind Transmission above.

[The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measures for Impact F-1: Construction and/or maintenance activities would significantly increase the probability of a wildfire

- F-1a** **Develop and implement a Construction Fire Prevention Plan.**
- F-1b** **Amend and implement Sempra Utilities Wildland Fire Prevention and Fire Safety Guide (2007).**
- F-1c** **Ensure coordination for emergency fire suppression.**
- F-1d** **Remove hazards from the work area.**
- F-1e(LR)** **Contribute to defensible space grants fund.**

Operational Impacts

Impact F-2: Presence of the overhead transmission line would increase the probability of a wildfire (Class I)

Sempra RWEPP (Mexico) (Class I). Wind turbines can also be the source of wildfire ignitions due to power collection line failure, turbine malfunction or mechanical failure, and lightning- and bird-related incidents. When mechanical or electrical failures cause turbines to catch fire, they may burn for many hours due to the limited ability of fire suppression crews to effectively fight fires hundreds of feet above the ground. Wind-blown flaming debris from a turbine fire can ignite vegetation in the surrounding area.

Impact F-2 is considered a significant and unmitigable impact because certain wind turbine-related ignition sources are unavoidable. The risk of ignitions and the risk of damage from a project-related ignition can be reduced, though not to a level that is less than significant, by creating a defensible space around homes at the wildland-urban interface (WUI) and by requiring a wind turbine protection system. Due to the potential for unavoidable ignitions related to the presence of the overhead transmission line to occur during extreme fire weather, the presence of the project would significantly increase the likelihood of a catastrophic wildfire (Class I). The risk of ignitions and the risk of damage from a project-related ignition can be reduced, though not to a level that is less than significant, through implementation Mitigation Measure and F-1e(LR), described above for the Jacumba Substation and Baja Wind Transmission. In addition, Mitigation Measure F-2d, Install wind turbine protection system, would reduce the risk of a turbine-related wildfire ignition.

SDG&E Jacumba Substation, Sempra Baja Wind Transmission Line (Mexico to U.S.) (Class I).

The presence of the overhead transmission line would create an ongoing source of potential wildfire ignitions for the life of the project. Line faults can be caused by such unpredictable events as conductor contact by floating debris, gun shots, and helicopter collisions; these events are rare but would be unavoidable. A fire started in the transmission corridor could burn into the nearby towns of Jacumba and La Rumorosa during extreme weather conditions potentially putting many homes at risk if a fire were to burn during extreme weather conditions. Impact F-2 is considered a significant impact because certain ignition sources are unavoidable. Due to the potential for unavoidable ignitions related to the presence of the overhead transmission line to occur during extreme fire weather, the presence of the project would significantly increase the likelihood of a catastrophic wildfire (Class I). The risk of ignitions and the risk of damage from a project-related ignition can be reduced, though not to a level that is less than significant, through implementation of adequate line clearances and by aiding in the creation of defensible space around homes at the WUI.

Mitigation Measure F-2a, Establish and maintain adequate line clearances, would reduce the risk of vegetation contact with conductors. Mitigation Measure F-1e(LR) would reduce the number of homes at risk of being lost in a project-ignited fire. Mitigation Measure F-2c would reduce the risk of ignitions from component failures.

SDG&E 69 kV Transmission Line, SDG&E Boulevard Substation Expansion (Class I). The presence of the overhead transmission line would create an ongoing source of potential wildfire ignitions for the life of the project. A fire started in the transmission corridor could burn into the nearby town of Jacumba during extreme weather conditions, but would be unlikely to affect the community of Boulevard due to its northerly location relative to the project, as Santa Ana winds always blow to the southwest. A project-related ignition could potentially put many homes at risk if a fire were to burn during extreme weather conditions. Impact F-2 is considered a significant impact because certain ignition sources are unavoidable. Due to the potential for unavoidable ignitions related to the presence of the overhead transmission line to occur during extreme fire weather, the presence of the project would significantly increase the likelihood of a catastrophic wildfire (Class I). The risk of ignitions and the risk of damage from a project-related ignition can be reduced, though not to a level that is less than significant, through implementation Mitigation Measures F-2a and F-1e(LR), described above for the Jacumba Substation and Baja Wind Transmission. Mitigation Measure F-2c would reduce the risk of ignitions from component failures.

SDG&E Communication Facility (No Impact). There would be no transmission line, no other source of ignition, associated with the communication facility.

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact F-2: Presence of the overhead transmission line would increase the probability of a wildfire

F-2a Establish and maintain adequate line clearances.

F-2c Perform climbing inspections.

F-2d Install wind turbine protection system.

F-1e(LR) Contribute to defensible space grants fund.

Impact F-3: Presence of the overhead transmission line would reduce the effectiveness of firefighting (Class I)

Sempra RWEP (Mexico). (Class I) The total height of the turbine and tower structures would likely range from 380 to 440 feet depending on the turbine size, elevation, and topography at each tower location, and the wind project would occupy an area of between approximately 8 and 30 square miles. The wind project would be located in hilly terrain with chaparral fuels, and would potentially present a significant impact (Class I) depending on final design due to the extreme height of turbines and the large geographic extent of the wind project. Mitigation Measures F-3a, Contribute to Powerline Firefighting Mitigation Fund, and F-3b, Prepare and implement a multi-agency fire prevention MOU, are required to reduce impacts to the extent possible; however, Impact F-3 would remain significant and unavoidable.

SDG&E Jacumba Substation, Sempra Baja Wind Transmission Line (Mexico to U.S.) (Class I). The transmission line associated with the La Rumorosa wind project could create a significant obstacle to firefighting and wildfire containment due to its presence in a generally flat, defensible landscape with sparse desert chaparral fuels. A significant conflict with wildfire containment is defined as no less than a 1.5-mile segment of very high conflict index values, and although modeling is not carried out for this project, it would be located in a generally defensible landscape, and it could create indefensible spaces between it and adjacent transmission lines. This impact would be considered significant should it occur (Class I). Mitigation Measures F-3a, Contribute to Powerline Firefighting Mitigation Fund, and F-3b, Prepare and implement a multi-agency fire prevention MOU, are required to reduce impacts to the extent possible; however, Impact F-3 would remain significant and unavoidable.

SDG&E 69 kV Transmission Line and SDG&E Boulevard Substation Expansion (Class I). The transmission line associated with the La Rumorosa wind project could create a significant obstacle to firefighting and wildfire containment due to its presence in a generally flat, defensible landscape with sparse desert chaparral fuels. A significant conflict with wildfire containment is defined as no less than a 1.5-mile segment of very high conflict index values, and although modeling is not carried out for this project, it would be located in a generally defensible landscape, and it could create indefensible spaces between it and adjacent transmission lines. This impact would be considered significant should it occur (Class I). Mitigation Measures F-3a, Contribute to Powerline Firefighting Mitigation Fund, and F-3b, Prepare and implement a multi-agency fire prevention MOU, are required to reduce impacts to the extent possible; however, Impact F-3 would remain significant.

SDG&E Communication Facility (No Impact). The White Star Communication Tower would be constructed on less than ½ acre and would be approximately 75 feet tall. As such, it would not create a significant obstacle to firefighting and wildfire containment.

The full text of the mitigation measures is included in Appendix 12 of this EIR/EIS.

Mitigation Measures for Impact F-3: Presence of the overhead transmission line would reduce the effectiveness of firefighting

F-3a **Contribute to Powerline Firefighting Mitigation Fund.**

F-3b **Prepare and implement a Multi-agency Fire Prevention MOU.**

Impact F-4: Project activities would introduce non-native plants, which would contribute to an increased ignition potential and rate of fire spread (Class II)

All Components (Class II). Project activities create the potential for the introduction and spread of non-native, invasive plants. Non-native plants are often spread by human and vehicle vectors in areas of large-scale soil disturbance and importation. These actions along with the opening of the vegetation canopy through the clearing of trees and shrubs involved with the construction and maintenance of the wind facilities will contribute to the introduction and proliferation of non-native, invasive plants. Certain invasive plants, like cheatgrass, medusa head, and Saharan mustard, can contribute to changes in wildfire frequency, timing and spread. The introduction of non-native plants in the project area would exacerbate wildfire risks in the project area.

The introduction of non-native plants with an increased ignition potential and rate of wildfire spread is considered a significant impact (Class II) that can be mitigated by following the prevention and management protocol outlined in Mitigation Measure B-3a, Prepare and Implement a Weed Control Plan. This measure also requires that proper actions are taken to prevent the introduction of invasive plants through materials and equipment used for the construction and maintenance of the wind facilities.

[The full text of the mitigation measure is included in Appendix 12 of this EIR/EIS.](#)

Mitigation Measure for Impact F-4: Project activities would introduce non-native plants, which would contribute to an increased ignition potential and rate of fire spread (Class II)

B-3a **Prepare and implement a Weed Control Plan.**

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