

## E. Revised Cumulative Scenario and Impacts

### E.1 Introduction and Methodology

Preparation of a cumulative impact analysis is required under CEQA. Under CEQA, “a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts” (14 Cal Code Regs §15130(a)(1)). Cumulative impacts must be addressed if the incremental effect of a project, combined with the effects of other projects is “cumulatively considerable” (14 Cal Code Regs §15130(a)). Such incremental effects are to be “viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects” (14 Cal Code Regs §15164(b)(1)). Together, these projects comprise the cumulative scenario which forms the basis of the cumulative impact analysis.

CEQA also states that both the severity of impacts and the likelihood of their occurrence are to be reflected in the discussion, “but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion of cumulative impacts shall be guided by standards of practicality and reasonableness, and shall focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact” (14 Cal Code Regs §15130(b)).

The focus of this Supplemental EIR cumulative analysis is on whether there is a new significant cumulative impact or a substantially more severe cumulative impact than was identified in the DPV2 Final EIR/EIS, and if so, whether the CRS expansion’s contribution to that impact would be cumulatively considerable.

### E.2 Revised Cumulative Scenario

The cumulative scenario in Section F of the DPV2 Final EIR/EIS (CPUC, 2006) evaluated those projects found within a geographic area sufficiently large to provide a reasonable basis for evaluating cumulative impacts. The area over which the cumulative scenario was evaluated varied by resource, because the nature and range of potential effects vary by resource. In addition, a number of plans and projections, such as those found in General Plans and other planning and environmental documents, were examined.

Since CPUC approval of DPV2 on January 25, 2007 in Decision D.07-01-040, a large number of renewable projects have been proposed on BLM-managed land, State land, and private land in California. In 2009, CPUC Decision D.09-11-007, which modifies D.07-01-040, allows SCE to commence construction of the California portion of DPV2 to position itself to take advantage of these potential future generation resources (most of which are renewable) near Blythe, California, in eastern Riverside County.

In the CPUC's Decision D.09-11-007, the CPUC published an Addendum to Final Environmental Impact Report as an attachment. The Addendum describes the types of impacts and mitigations that would be associated with future potential renewable energy projects in the general area around Blythe, including impacts in the area identified by the California Renewable Energy Transmission Initiative (RETI) as the “East Riverside” Competitive Renewable Energy Zone (East Riverside CREZ). Potential development was identified based on projects in the California Independent System Operator (CAISO) queue, BLM solar applications and RETI resource assessments. However, at the time, most of the future renewable energy projects that would interconnect to the California portion of DPV2 were in the preliminary planning stages and thus none of the projects were sufficiently detailed to allow meaningful, non-speculative review.

After Decision D.09-11-007, several large solar power projects were proposed in the Blythe area. Two of these projects, the Blythe Solar Power Project (BSPP)<sup>1</sup> and the Genesis Solar Energy Project (GSEP),<sup>2</sup> have requested interconnection to the electrical grid at the Midpoint-Desert Southwest (DSW) Substation. As a result, SCE developed a plan to expand the Midpoint Substation, now known as the Colorado River Substation, to allow the required space for generation-tie lines to be interconnected with the SCE 500 kV transmission system.

During 2009 to 2010, the BSPP and the GSEP have been evaluated under CEQA and NEPA by the BLM and the California Energy Commission (CEC) (see Documents Incorporated by Reference in Section A.4.2). The CEC and the BLM identified the California desert as the largest area within which cumulative effects should be assessed for all disciplines. The documents discussed incentives for renewable development (e.g., U.S. Department of Energy Loan Guarantee Program<sup>3</sup> and U.S. Treasury Department's Payments for Specified Energy Property in Lieu of Tax Credits<sup>4</sup>), and the likelihood of development of the large renewable projects under Power Purchase Agreements on BLM and private land. Not all of the projects included in the CEC and BLM analyses will complete the environmental review, and not all projects will be funded and constructed.

Tables E-1 and E-2 (at the end of this section) present existing and foreseeable future projects relevant to the analysis of the Colorado River Substation expansion. These projects are illustrated on Figure E-1 (also at the end of this section).

### E.3 Cumulative Impact Analysis

The cumulative analyses presented in the past CEC and BLM documents would have a similar geographic scope, setting, existing and foreseeable projects and cumulative conditions (see Documents Incorporated by Reference in Section A.4.2). The increased ground disturbance associated with construction of the Proposed Project is addressed in this SEIR for applicable issue areas. However, for most environmental disciplines the changes would be minimal, the project's cumulative contribution has not changed from the DPV2 Final EIR/EIS, and there would not be a new significant cumulative impact nor a substantially more severe cumulative impact than was identified in the DPV2 Final EIR/EIS. Thus, this Supplemental EIR addresses only portions of the five issue areas analyzed in Section C where based on new information regarding the substation expansion, telecom routes and water supply, there is the potential

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<sup>1</sup> The BSPP is a 1,000 MW solar thermal project located approximately 2 miles north of I-10, 8 miles west of the City of Blythe, and 5 miles northeast of the CRS site. Two new 230 kV overhead gen-tie lines, approximately 9.8 miles long, will connect the BSPP switchyard to CRS.

<sup>2</sup> The GSEP is a 250 MW solar thermal project located approximately 25 miles west of the city of Blythe, north of Ford Dry Lake and I-10, and 11 miles northwest of the CRS. A gen-tie line will connect from GSEP to the CRS via the Blythe Energy Project Transmission Line (BEPTL). Six new transmission poles would be constructed by GSEP to connect GSEP electricity from the BEPTL into the CRS.

<sup>3</sup> Pursuant to §1703 of Title XVII of the Energy Policy Act of 2005 – Offers a loan guarantee that is also a low interest loan to finance up to 80 percent of the capital cost at an interest rate much lower than conventional financing. The lower interest rate can reduce the cost of financing and the gross project cost on the order of several hundred million dollars over the life of the project, depending on the capital cost of the project.

<sup>4</sup> Under §1603 of the American Recovery and Reinvestment Act of 2009 (Public Law 111-5) – Offers a grant (in lieu of investment tax credit) to receive funding for 30 percent of the total capital cost at such time as a project achieves commercial operation (currently applies to projects that begin construction by December 31, 2010 and begin commercial operation before January 1, 2017).

for change in the cumulative impact analysis from the DPV2 Final EIR/EIS. The environmental settings, applicable regulations, geographic scope, and significance thresholds would be the same as presented in the DPV2 Final EIR/EIS and other past documents, such as the GSEP Revised Staff Assessment (for biological resources). The cumulative projects are shown on Figure E-1.

**All Site Alternatives.** For all environmental disciplines except biological and cultural resources, the cumulative scenario and contribution of the Proposed Project would be the same for the five site alternatives evaluated in the Supplemental EIR due to their proximity and similarities in the type, duration and extent of construction activities. Cumulative impacts related to biological resources and cultural resources for the substation site alternatives are discussed under Sections E.3.1 and E.3.2, respectively.

## **E.3.1 Biological Resources**

### **E.3.1.1 Proposed Project**

A cumulative impact would result if the Proposed Project, when combined with impacts of other past, present and future projects would exceed the significance criteria presented in Section D.2.4.1 of the DPV2 EIR/EIS. If there is a significant cumulative impact, this analysis also determines whether the Proposed Project's contribution would be cumulatively considerable.

The cumulative scenario and analysis performed by the CEC for the GSEP evaluates the current baseline of past effects, current (proposed or approved) projects, and reasonably foreseeable or probable future projects in the I-10 corridor, as well as the greater Northern and Eastern Colorado Desert Coordinated Management Plan (NECO) planning area (CEC, 2010b). Given its proximity to the proposed CRS expansion, the cumulative scenario for the GSEP as described in the Revised Staff Assessment (CEC, 2010b) is substantially similar to proposed CRS expansion. Many of the same habitat types, special-status species, and sensitive resources (e.g., waters of the State) occur in each project area and the GSEP also considers the NECO planning area in its cumulative scenario. In coordination with BLM, the list of existing and foreseeable future projects has been updated from Biological Resources Table 9 in Section C.2 of the GSEP Revised Staff Assessment as presented in Table E-3, below.

This cumulative effects analysis considers those biological resources that would be impacted by the proposed CRS expansion and for which there is the potential for substantial change in the cumulative impacts identified in the DPV2 Final EIR/EIS. This includes the species and habitats addressed in Section D.2 — stabilized and partially stabilized sand dunes, Mojave fringe toed lizard, Swainson's hawk, northern harrier, desert kit fox, ribbed cryptantha, Harwood's eriastrum, winged cryptantha, and Harwood's milk-vetch.

The methodology for this analysis uses a quantitative geographic information system (GIS) analysis of direct cumulative effects to habitat loss from existing and foreseeable future projects that was developed by the CEC; the results are presented in Table E-3. Refer to the GSEP Revised Staff Assessment (CEC, 2010b) for a description of the quantitative cumulative impact methodology. The quantitative analysis of direct cumulative effects is supplemented by a qualitative analysis of indirect cumulative effects based on consultations with agency biologists and regional experts, as well as a literature review of the threats to species and their habitats. A qualitative analysis is presented for those resources for which an extensive quantitative analysis is infeasible given a lack of data, or unnecessary in consideration of the severity of the cumulative impact (14 Cal Code Regs §15130(b)).

**Impact B-19: The Proposed Project would contribute to a cumulatively considerable impact to special-status species or sensitive habitat when combined with impacts from past, present, and reasonably foreseeable future projects (Class I for Mojave fringe-toed lizard, Class II for desert kit fox and rare plants and sand dune habitat, Class III for northern harrier and Swainson’s hawk)**

Over the past 200 years, California’s southern deserts have been subject to major human-induced changes that have adversely affected native plant and animal communities by habitat loss, fragmentation, and degradation. Recently, numerous renewable projects have been proposed and approved on BLM, State, and private land in the I-10 corridor between Desert Center and the Colorado River. These existing and future projects in combination with the Proposed Project would result in the cumulative loss or modification of thousands of acres of habitat known to support special-status species including Mojave fringe toed lizard, Swainson’s hawk, northern harrier, desert kit fox, ribbed cryptantha, Harwood’s eriastrum, winged cryptantha, and Harwood’s milk-vetch.

**Table E-3. Cumulative Effects: Special-status Species Habitat**

Special-status Species Habitat	Total Habitat (acres)	Impacts to Habitat from Existing Projects (percent of total habitat)	Impacts to Habitat from Foreseeable Future Projects (percent of total habitat)	Contribution of CRS to Cumulative Impacts (percent of total future impacts)
Mojave fringe-toed lizard habitat (all NECO) <sup>1</sup>	630,121	14,541 (2.3%)	38,220 (6.1%)	1,463 <sup>3</sup> (3.8%)
Mojave fringe-toed lizard habitat (Chuckwalla population) <sup>1</sup>	99,657	8,290 (8.3%)	17,041 (17.1%)	1,463 <sup>3</sup> (8.6%)
Desert kit fox <sup>2</sup>	4,795,631	134,750 (2.8%)	209,107 (4.4%)	98.7 (0.04%)

1 - Total habitat based on the BLM NECO Landforms dataset (BLM CDD, 2002), selecting following values: undifferentiated dunes; crescentic dunes, longitudinal dunes; sandy plains; playas, and sandy dissected fans.

2 - Total habitat based on the BLM NECO Landforms dataset (BLM CDD, 2002), excluding mountains playas, badlands, and lava flows.

3 - Total includes 98 acres of direct permanent impact and 1,365 acres of indirect permanent impact.

**Mojave Fringe-toed Lizard**

The range of Mojave fringe-toed lizard (MFTL) is generally restricted to fine, loose, aeolian (wind-blown) sand. This obligate habitat specificity to loose sand, which is a patchy habitat type, results in a naturally fragmented distribution that leaves the species vulnerable to local extirpations from additional habitat disturbance and fragmentation (Murphy et al., 2006).

The cumulative impact analysis for MFTL considers a cumulative scenario encompassing the NECO planning area as well as the Chuckwalla Valley. The NECO planning area provides context for the cumulative scenario in the majority of the range of MFTL. It is believed that there is little gene flow between isolated dunes given the lack of intervening sand (Murphy et al., 2006); therefore it is also necessary to understand the local context of cumulative MFTL impacts in Chuckwalla Valley. Existing projects have resulted in a direct loss of 14,541 acres of MFTL habitat in the NECO planning area (refer to Table E-3); total cumulative habitat loss is certainly greater throughout the species range. The Chuckwalla Valley population of MFTL is particularly vulnerable; existing projects have resulted in a direct loss of more than 8 percent of the total MFTL habitat available in the Chuckwalla Valley (refer to Table E-3).

In addition to direct habitat loss for MFTL, development in active dune habitat creates barriers to downwind (Aeolian) or fluvial sand transport. Environmental changes that stabilize sand, affect sand sources, or block sand movement corridors will affect this species (Turner et al., 1984; Jennings and Hayes, 1994). The acreage of this cumulative indirect impact is often larger than the direct impact, and is not quantified for the existing and future projects in Table E-3. Other cumulative indirect effects resulting from existing projects include: premature stabilization of dunes by the spread of noxious weeds, which also fuel wildfires; OHV-related mortalities from the introduction of vehicles into formerly undisturbed habitats; destruction of native vegetation, which reduces food resources; and an increase in predation by ravens and other predators from an increase in perching structures.

Future foreseeable projects could result in an additional 38,220 acres of habitat loss and the concomitant indirect effects of human activity in MFTL habitat. These direct and indirect effects of existing and reasonably foreseeable future projects combine to exacerbate threats to MFTL and are cumulatively significant. Of note is a pending proposal to list the Amargosa River distinct population segment of Mojave fringe-toed lizard (CBD, 2006), indicating that the species is currently in decline and additional regulatory protections may be warranted in light of threatened (future) habitat destruction or modification.

The proposed CRS is located in the Palen-Chuckwalla Valley sand transport corridor. Its construction would occupy approximately 90 acres of MFTL habitat and effectively block sand transport to 1,365 acres downwind (east) of the Proposed Project area resulting in dune deflation and additional habitat loss and fragmentation. The Proposed Project's contribution to future MFTL habitat loss in the NECO planning area and within the Chuckwalla Valley is 3.8 percent and 8.6 percent, respectively. Construction of the CRS in sand dune habitat would also contribute to the aforementioned indirect impacts to MFTL related to noxious weeds, vehicle mortality and increased predation.

In consideration of the magnitude of threats to MFTL from existing and reasonably foreseeable future projects, the substantial habitat loss and downwind habitat degradation/elimination from the CRS project, which would ultimately result in range contraction of the species, would be cumulatively considerable. New Mitigation Measure B-9j (Provide compensatory mitigation and restoration/enhancement of protected land for impacts to sand dune habitat) would reduce the Proposed Project's contribution to cumulative MFTL habitat loss by securing and preserving unprotected private lands or enhancing/sand dunes already conserved or on BLM land that is not slated for development. Even with the implementation of mitigation, when combined with impacts of past, present, and reasonably foreseeable projects, the Proposed Project's contribution to significant cumulative MFTL impacts remains cumulatively considerable (Class I).

### ***Desert Kit Fox***

The geographic scope of the cumulative analysis for desert kit fox comprises the NECO planning area. Within this area, habitat loss from existing projects is approximately 134,750 acres (refer to Table E-3). In addition to habitat loss, indirect cumulative effects to desert kit fox from existing projects includes habitat fragmentation and the diminished habitat values of remaining habitat from increased noise; disruption from night lighting; exotic plant invasion (which fuels wildfires and alters fire regimes); dust and air pollution; an increase in predators; agriculture and urban development, and; the consequences of human intrusion into previously undisturbed habitats (such as hunting, use of rodenticides and other poisons, road kills, trapping, and human disturbance).

Reasonably foreseeable future projects could result in 209,107 acres of additional habitat loss, representing approximately 4.4 percent of the total desert kit fox habitat mapped in NECO. This expected

exacerbation of ongoing habitat loss and the resultant indirect effects constitutes a cumulatively significant impact.

Construction of the Proposed Project would result in the loss of approximately 98 acres of marginal desert kit fox habitat (indirect downwind impacts would not affect habitat value for desert kit fox). The Proposed Project's contribution to desert kit fox habitat is not cumulatively considerable given the poor quality of the dune habitat and the abundance of remaining habitat (Class III). The greater impact of the Proposed Project is the potential for mortality and harassment of desert kit fox in adjacent habitat from increased human activity and vehicles. With implementation of Mitigation measure B-9g(rev), which requires identification and passive relocation of animals in the project area, the Proposed Project's contribution to potential mortality or disruption of desert kit foxes would be less than cumulatively considerable (Class II).

### ***Swainson's Hawk and Northern Harrier***

The geographic context of the cumulative impact analysis for Swainson's hawk and northern harrier comprises raptor foraging habitat in the NECO planning area. Suitable foraging habitat includes the majority of NECO landform types as well as some developed areas that support a suitable prey base. A qualitative cumulative impact analysis has been conducted due to the infeasibility of quantifying the large extent of acreage potentially utilized for foraging by northern harriers and Swainson's hawks.

The combined effect of the development of existing and future foreseeable projects would result in a significant cumulative loss of Swainson's hawk and northern harrier foraging habitat in the NECO planning area. Of particular importance is the conservation of foraging habitat proximate to nesting territories.

The Proposed Project would result in the direct loss of 98 acres of marginal winter foraging habitat for Swainson's hawk and northern harrier (indirect downwind impacts would not affect foraging habitat value for these species). Refer to Section D.2.1 for a description of Swainson's hawk and northern harrier foraging habitat requirements. Given the poor quality of foraging habitat that would be lost and the relative abundance of surrounding higher-quality foraging habitat in creosote scrub, the project's contribution to the significant cumulative loss of raptor foraging habitat is less than cumulatively considerable (Class III).

### ***Special-status Plants***

Ribbed cryptantha, Harwood's eriastrum, winged cryptantha, and Harwood's milk-vetch have similar sandy habitat requirements as MFTL. The limited distribution of suitable habitat for these dune-dependent special-status plant species makes them vulnerable to the cumulative effects of habitat loss and fragmentation from existing and future development in the NECO planning area. Cumulative indirect impacts include: altered drainage patterns, disrupted wind- or fluvial-sand transport processes, reduced gene flow between isolated populations, the spread of non-native plants, and an increased risk of fire. Climate change is expected to exacerbate the effects of drought and disproportionately affect native desert annuals. These cumulative impacts to special-status plants are considered significant.

The Proposed Project's contribution to these significant cumulative impacts, however, would be less than cumulatively considerable through Mitigation Measure B-8b, which requires implementation of impact avoidance and minimization measures and Mitigation Measure B-9j, which requires acquisition of dune habitat as compensatory mitigation (Class II).

### ***Stabilized and Partially Stabilized Sand Dunes***

Desert sand dune habitat, including the stabilized and partially stabilized dunes occurring within and proximate to the Proposed Project in the Chuckwalla Valley, is designated by BLM in the NECO Plan as sensitive because of its limited extent and high levels of endemic and rare species. These factors make this sensitive natural community vulnerable to the cumulative direct and indirect effects of habitat loss and degradation from existing and future development in the NECO planning area discussed above for ribbed cryptantha, Harwood's eriastrum, winged cryptantha, Harwood's milk-vetch, and MFTL. These cumulative impacts to stabilized and partially stabilized dunes are considered significant.

The Proposed Project's contribution to these significant cumulative impacts, however, would be less than cumulatively considerable through Mitigation Measure B-8b, which requires implementation of measures to avoid and minimize dune habitat degradation and Mitigation Measure B-9j, which requires acquisition of dune habitat as compensatory mitigation (Class II).

#### **E.3.1.2 All Substation Site Alternatives**

The cumulative scenario pertaining to the substation alternatives is the same as for the Proposed Project, described above. Each alternative's contribution to existing significant cumulative biological resource impacts would vary with the amount of acreage directly or indirectly impacted by the alternative. With the exception of Avoidance Alternative #1 and the Southern Alternative, all alternatives would contribute to cumulative MFTL and special-status dune-dependent plant impacts. With regard to MFTL impacts, Avoidance Alternative #2 and Avoidance Alternative #3 would be located outside of the active sand transport corridor, which would reduce the contribution of these alternatives to less than cumulatively considerable (Class III).

However, the Partial Avoidance Alternative would be mostly located within the sand transport corridor and would have significant direct and indirect (downwind) impacts to MFTL; even with mitigation, the contribution of the Partial Avoidance Alternative to significant cumulative MFTL impacts would be cumulatively considerable (Class I) for the same reasons as the Proposed Project. The contribution of the Partial Avoidance Alternative to significant cumulative special-status dune-dependent plant impacts would be less than cumulatively considerable with the implementation of Mitigation Measures B-8b and B-9j (Class II) for the same reasons as the Proposed Project.

All alternatives would contribute to the significant cumulative loss of desert kit fox habitat, as well as Swainson's hawk and northern harrier foraging habitat. For every alternative, the contribution to cumulative habitat loss for these species would be less than cumulatively considerable (Class III). For all alternatives, the contribution to cumulatively significant impacts to desert kit fox resulting from mortality, injury, and disturbance is less than cumulatively considerable with implementation of Mitigation Measure B-9g(rev) (Class II) for the same reasons as the Proposed Project (discussed in Section E.3.1.1).

### **E.3.2 Cultural Resources**

#### **E.3.2.1 Proposed Project**

A cumulative impact would result if the proposed CRS expansion project impacts, when combined with other past, present and future projects would exceed the significance criteria presented in Section D.7.4.1 of the DPV2 EIR/EIS (restated in Section D.3.3 of this Supplemental EIR).

***Impact C-6: The Proposed Project would contribute to a cumulatively considerable impact on cultural resources when combined with impacts from past, present, and reasonably foreseeable future projects (Class II)***

The previous ground disturbance from prior projects and the ground disturbance related to the future construction of the proposed CRS expansion and other proposed solar power and utility projects in the vicinity could have a cumulatively considerable effect on subsurface archaeological deposits, both pre-historic and historic.

The geographic area considered for cumulative impacts on cultural resources was the area on either side of I-10 between Desert Center and Blythe in eastern Riverside County (I-10 Corridor). The area of this strip is 192 square miles (122,440 acres).

Although the total number of cultural resources present in this area is unknown, the CEC derived a rough order of magnitude estimate (CEC, 2010c; see Cultural Resources Table 14 in BSPP Revised Staff Assessment, Part 2) based on recent surveys related to three proposed solar power projects (GSEP, Palen Solar Power Project and BSPP), which surveyed a total of 19,184 acres. These projects recorded 329 sites, indicating that the corridor has an average site density of 0.017 cultural resources per acre, and 0.003 potentially eligible resources per acre. This estimation suggests that the I-10 Corridor originally contained approximately 2,081 cultural resources, 367 of which may have been eligible for the NRHP and the CRHR (CEC, 2010c).

The CRS expansion is expected to result in permanent adverse impacts to archaeological resources related to construction activities, as described in Section D.3.4 of this SEIR. No Traditional Cultural Properties (TCPs) have been identified within the CRS expansion project area. Impacts to archaeological resources would be expected to contribute only a small amount to the possible permanent cumulative impacts related to cultural resources because relatively few resources are expected to be eligible for the NRHP or CRHR. Using projections from studies of the cumulative impact area, above (CEC, 2010c), only one or two archaeological resources within the CRS expansion would be expected to be eligible for the CRHR or NRHP. Twelve formally unevaluated cultural resources occur within and adjacent to areas that would be impacted by ground-disturbing activities for the proposed CRS expansion project. Four of these are adjacent and can be protected from construction impacts through careful design and monitoring. Therefore, it is anticipated that only one or two eligible cultural resources would be impacted by the CRS expansion project, and that, through mitigation, impacts would be reduced to less than significant levels.

The solar projects and any other future projects in the area must, by law, mitigate impacts to as-yet-undiscovered subsurface archaeological sites to less than significant levels through measures, such as construction monitoring, evaluation of resources discovered during monitoring, and avoidance or data recovery for resources evaluated as CRHR-eligible, as required in mitigation by the CEC and BLM. No impacts to human remains or TCPs have been identified nor are expected. Since the impacts from the Proposed Project would be mitigated to a less than significant level by the project's compliance with proposed mitigation measures (see Section D.3), and since similar protocols must be applied to other projects in the area, incremental effects of the CRS Expansion on cultural resources in the cumulative impact area are not expected to be cumulatively considerable when viewed in conjunction with other projects.

### **E.3.2.2 All Substation Site Alternatives**

The cumulative scenario pertaining to the substation alternatives is the same as for the Proposed Project, described above. Each alternative's contribution to existing cumulative cultural resource impacts would vary with the number of NRHP or CRHR eligible resources impacted by the alternative. With the



exception of Avoidance Alternative #2, all alternatives would be expected to contribute to minor loss of archaeological resources, with the possibility of one or two eligible archaeological resources that could not be avoided. For every alternative, the contribution to cumulative cultural resources impacts would be less than cumulatively considerable.

### **E.3.3 Hydrology and Water Resources**

A cumulative impact would result if Proposed Project impacts, when combined with other past, present and future projects would exceed the significance criteria presented in Section D.12.4.1 of the DPV2 EIR/EIS (restated in Section D.4.3 of this SEIR).

***Impact H-8: The Proposed Project would contribute to a cumulatively considerable impact on water resources when combined with impacts from past, present, and reasonably foreseeable future projects (Class II)***

The geographic scope for cumulative water resources impacts includes projects within the same ground-water basin as the Proposed Project (Chuckwalla Valley Groundwater Basin).

**Soil Erosion, Water Quality, and Flooding.** Construction of the Proposed Project and other cumulative construction projects listed in Tables E-1 and E-2 would include soil-disturbing activities such as grading and excavation that could result in erosion and sedimentation, as well as flooding due to new impervious surfaces. Likewise, there would be the potential for spills of hazardous materials or oil during construction and operation that would potentially degrade water quality. Encroachment of a project structure from the Proposed Project or any of the cumulative projects into a water flow path could also result in erosion damage to the encroaching structure.

The Proposed Project is not located within a FEMA-designated Flood Hazard Area, and watercourses in the cumulative geographic area are primarily desert washes with no water during most of the year. Given the distance to the groundwater table (70-90 feet bgs) over the Chuckwalla Valley Groundwater Basin and the implementation of hazardous material management plans, monitoring plans and mitigation required as part of the other cumulative projects (e.g., by the CEC, for Riverside County permits, etc.), cumulative impacts on water quality, erosion and flooding would be less than significant.

As described in Section D.4, implementation of mitigation measures would reduce construction and operational water resources impacts related to soil erosion, changes in groundwater quality, and changes in surface water hydrology and water quality to a less than significant level for the Proposed Project. As a result, the Proposed Project's contribution to cumulative impacts related to soil erosion, water quality and flooding would not be cumulatively considerable.

**Groundwater Supply and Recharge.** The revised water usage for the expanded CRS estimates that 309.3 to 364.6 million-af would be used over approximately 22 to 24 months from groundwater wells. The revised water source would potentially deplete groundwater supplies or interfere with groundwater recharge (see Impact H-7 in Section D.4), which in turn may affect water availability for other users in the area (see Impact S-2 in Section D.5).

Other projects in the area that would introduce a new demand on the Chuckwalla Valley Groundwater Basin include the BSPP, with a water demand of 4,100 acre-feet per year (afy) during construction (CEC, 2010a), and the GSEP, with a water demand of 1,605 afy during construction (CEC, 2010b). Water demand for the BSPP project would be met by available supply within the Palo Verde Mesa Groundwater Basin,

which is hydrologically connected to the Chuckwalla Valley Groundwater Basin, but would not pump water directly from the Chuckwalla Valley Groundwater Basin (CEC, 2010a).

As a worst case scenario, if construction of the GSEP project occurs at the same time as construction of the CRS expansion project, the annual available water supply of 2,608 acre-feet from the Chuckwalla Valley Groundwater Basin would be sufficient to meet the needs of the GSEP project and the Proposed Project, as well as existing demands listed in Table D.3-1 in Section C (Estimated Budget for the Chuckwalla Valley Groundwater Basin) of this Supplemental EIR. Therefore, the Proposed Project in conjunction with past present and reasonably foreseeable projects would not result in overdraft conditions.

With the incorporation of mitigation measures included in Section D.4 and the DPV2 EIR/EIS (2006), the project's incremental effect on water resources would not be cumulatively considerable.

### **E.3.4 Socioeconomics and Utilities**

A cumulative impact would result if Proposed Project impacts, when combined with other past, present and future projects would exceed the following significance criterion:

- The Proposed Project would require water, or would generate solid waste or wastewater that exceeds the ability of existing facilities to accommodate the new capacities

As described in Section D.5 of the SEIR, this is the only significance criterion presented in Section D.14.4.1 of the DPV2 EIR/EIS that applies to the revised water supply at CRS.

#### ***Impact S-5: The Proposed Project would contribute to a cumulatively considerable demand on local water when combined with impacts from past, present, and reasonably foreseeable future projects (Class II)***

As discussed under Section ~~E.3.4~~E.3.3 (Hydrology and Water ~~Quality~~Resources), the geographic scope for socioeconomics and utilities includes related projects that would draw from local wells in the same groundwater basin in conjunction with the Proposed Project construction. Similar construction activities would place demands on local water. The revised water source would avoid impacts to municipal water supplies, but instead water usage during construction activities would potentially deplete groundwater supplies or interfere with groundwater recharge, which would in turn potentially affect local users.

However, Section ~~E.3.4~~E.3.3 concludes that construction of the Proposed Project and associated groundwater wells would not result in overdraft conditions, and there would be an adequate groundwater supply to support the other past present and reasonably foreseeable projects and existing users within the groundwater basin. With the implementation of mitigation described in the Hydrology and Water Resources section, the Proposed Project demand on local water would be less than significant and its affect on local water supply for other users in conjunction with other past, current and reasonably foreseeable projects would not be cumulatively considerable (Class II).

### **E.3.5 Greenhouse Gas Emissions**

The analysis for greenhouse gas (GHG) emissions is a cumulative impact assessment because GHG emissions contribute, by their nature, on a cumulative basis, to the adverse environmental impacts of global climate change. The following discussion is a summary of the impacts presented in Section D.6 of this Supplemental EIR as they relate to GHG emissions from the proposed CRS expansion project.

The Proposed Project would cause greenhouse gas emissions, and past projects that have also caused increased greenhouse gas emissions include most development within Riverside County. All of the present and reasonably foreseeable projects identified in the cumulative scenario would require construction activities that would also result in increased greenhouse gas emissions.

As discussed in Section D.6, the Colorado River Substation expansion would occur in conjunction with the BSPP and GSEP. However, as described in Section D.6.5, the BSPP and GSEP projects would create direct emissions that exceed the preliminary GHG screening level of 10,000 MTCO<sub>2</sub>e/yr.

The CRS expansion project alone would contribute 1,465 MTCO<sub>2</sub>e/yr during construction and less than 100 MTCO<sub>2</sub>e/yr during operation. With feasible control of SF<sub>6</sub> emissions (Mitigation Measure GHG-1), the project's impact is less than significant (see Section D.6.4). However, when combined with impacts of past, present, and reasonably foreseeable projects, including the BSPP and GSEP projects (as described in Section D.6.5), the Proposed Project's contribution would be cumulatively considerable.

Construction and operation of the Proposed Project would not be inconsistent with the CARB Climate Change Scoping Plan, which was approved by the CARB on December 12, 2008. Because of its role in inter-connecting renewable energy resources, construction and operation of the Proposed Project would facilitate implementation of the Scoping Plan, which is based on expanding access to renewable energy and continuing the reliable delivery of electricity to customers in California. Therefore, the project would result in no conflict with an applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. Likewise, the effect of this impact would not have the potential to combine with similar effects of other projects and is not cumulatively considerable.

**Table E-1. Existing Projects along the I-10 Corridor (Eastern Riverside County)**

ID # on Fig. E-1	Project Name	Location	Ownership	Status	Acres	Project Description
1	Interstate 10	Linear interstate highway running from Santa Monica to Blythe (in California)	Caltrans	Existing	N/A	Interstate 10 (I-10) is a major east-west route for trucks delivering goods to and from California. It is a four-lane divided highway in the project region.
2	Chuckwalla Valley State Prison	19025 Wiley Well Rd. Blythe, CA	CA Dept. of Corrections & Rehabilitation	Existing	1,080	State prison providing long-term housing and services for male felons classified as medium and low-medium custody inmates jointly located on 1,720 acres of state-owned property. APNs 879-04-0006, 008, 012, 027, 028, 029, 030.
3	Ironwood State Prison	19005 Wiley Well Rd. Blythe, CA	CA Dept. of Corrections & Rehabilitation	Existing	640	ISP jointly occupies with Chuckwalla Valley State Prison 1,720 acres of state-owned property, of which ISP encompasses 640 acres. The prison complex occupies approximately 350 acres with the remaining acreage used for erosion control, drainage ditches, and catch basins. APNs 879-04-0001, 004, 009, 010, 011, 015, 016, 017, 018, 019, 020.
4	Devers–Palo Verde No. 1 Transmission Line	From Palo Verde (Arizona) to Devers Substation	SCE	Existing	N/A	Existing 500 kV transmission line parallel to I-10 from Midpoint Substation, approximately 10 miles southwest of Blythe, to the SCE Devers Substation, near Palm Springs.
5	Blythe Energy Project Transmission Line	From the Blythe Energy Project (Blythe, CA) to Julian Hinds Substation	Blythe Energy, LLC	Existing	N/A	Transmission Line Modifications including upgrades to Buck Substation, approximately 67.4 miles of new 230 kV transmission line between Buck Substation and Julian Hinds Substation, upgrades to the Julian Hinds Substation, installation of 6.7 miles of new 230 kV transmission line between Buck Substation and SCE's DPV 500 kV transmission line.
6	Blythe Energy Project	City of Blythe, north of I-10, 7 miles west of the CA/AZ border	Blythe Energy, LLC	Existing	76	520 MW combined-cycle natural gas-fired electric-generating facility. Project is connected to the Buck Substation owned by WAPA.
7	West-wide Section 368 Energy Corridors	Riverside County, parallel to DPV corridor	BLM, DOE, US Forest Service	Approved by BLM and US Forest Service	N/A	Designation of corridors on federal land in the 11 western states, including California, for oil, gas, and hydrogen pipelines and electricity transmission and distribution facilities (energy corridors). One of the corridors runs along the southern portion of Riverside County.

**Table E-1. Existing Projects along the I-10 Corridor (Eastern Riverside County)**

ID # on Fig. E-1	Project Name	Location	Ownership	Status	Acres	Project Description
8	Eagle Mountain Pumping Plant	Eagle Mountain Road, west of Desert Center	Metropolitan Water District of Southern California	Existing		144-foot pumping plant that is part of the Metropolitan Water District of Southern California's facilities. APNs 807-15-0007, 807-15-0009, 807-15-0010.
9	Recreational Opportunities	Eastern Riverside County	BLM	Existing	N/A	BLM has numerous recreational opportunities on lands in eastern Riverside County along the I-10 corridor including the Wiley Well Campground, Coon Hollow Campground, and Midland Long-Term Visitor Area.
10	Kaiser Mine	Eagle Mountain, north of Desert Center	Kaiser Ventures, Inc.	Mining activities stopped in 1983		Kaiser Steel mined iron ore at Kaiser Mine in Eagle Mountain and provided much of the Pacific Coast steel in the 1950s. Mining project also included the Eagle Mountain Railroad, 51 miles long. Imported steel captured market share in the 1960s and 1970s and primary steelmaking closed in the 1980s. APN 701-38-0031
11	Chuckwalla Valley Raceway	Desert Center Airport (no longer a community airport)	Developer Matt Johnson	Existing	400	500-mile race track located on 400 acres of land that used to belong to Riverside County and was used as the Desert Center Airport. APNs 811-14-2016, 811-14-2006. Small private airstrip kept as part of project. Construction completed in March 2010.

**Table E-2. Future Foreseeable Projects along the I-10 Corridor (Eastern Riverside County)**

ID # on Fig. E-1	Project Name	Location	Ownership	Status	Acres	Project Description
A	4 commercial projects	Blythe, CA	Various	Approved	N/A	Four commercial projects have been approved by the Blythe Planning Department including the Agate Road Boat & RV Storage, Riverway Ranch Specific Plan, Subway Restaurant and Motel, and Agate Senior Housing Development.
B	Intake Shell	Blythe, CA		Under Construction	N/A	Reconstruction of a Shell facility located at Intake & Hobson Way. Demolition occurred in 2008, reconstruction planned for 2009-2010.
C	15 residential developments	Blythe, CA	Various	Approved or Under Construction	N/A	Twelve residential development projects have been approved by the Blythe Planning Department including: Vista Palo Verde (83 Single Family Residential [SFR]), Van Weelden (184 SFR), Sonora South (43 SFR), Ranchette Estates (20 SFR), Irvine Assets (107 SFR), Chanslor Village (79 SFR), St. Joseph's Investments (69 SFR), Edge-water Lane (SFR), The Chanslor Place Phase IV (57 SFR), Cottonwood Meadows (103 Attached SFR), Palo Verde Oasis Phase IV (29 SFR). Three residential development projects have been approved and are under construction including: The Chanslor Phase II & III (78 SFR), River Estate at Hidden Beaches, Mesa Bluffs Villas (26 Attached SFR).
D	Devers–Palo Verde No. 2 Transmission Line Project (CA only portion)	From the Midpoint Substation to Devers Substation to Valley Substation	SCE	Petition to Modify Request to construct CA-only portion was approved by CPUC in November 2009. DPV2 to Arizona was originally approved by the CPUC in June 2007.	N/A	New 500 kV transmission line parallel to the existing Devers–Palo Verde Transmission Line from Midpoint Substation, approximately 10 miles southwest of Blythe, to the SCE Devers Substation, near Palm Springs. The ROW for the 500 kV transmission line would be adjacent to the existing DPV ROW and would require an additional 130 feet of ROW on federal and State land and at least 130 feet of ROW on private land and Indian Reservation land.
E	Colorado River Substation	10 miles southwest of Blythe	SCE	Approved by CPUC in November 2009; Expansion analyzed in this SEIR; Application for PTC filed with CPUC in November 2010 for expansion.	44	The substation was approved by the CPUC (as the "Midpoint Substation" but is proposed to be expanded as a 500/230 kV substation and would be constructed in an area approximately 1,000 feet by 1,900 feet, permanently disturbing approximately 90 acres. The 500 kV substation would include buses, circuit breakers, and disconnect switches. The switchyard would be equipped with 108-foot-high dead-end structures. Outdoor night lighting would be designed to illuminate the switchrack when manually switched on.

**Table E-2. Future Foreseeable Projects along the I-10 Corridor (Eastern Riverside County)**

ID # on Fig. E-1	Project Name	Location	Ownership	Status	Acres	Project Description
F	Wiley Well Communication Tower (part of the Public Safety Enterprise Communication System)	East of Wiley Well Road, just south of I-10	Riverside County	Final EIR for the Public Safety Enterprise Communication System published in August 2008.	N/A	The Public Safety Enterprise Communication project is the expansion of Riverside County's fire and law enforcement agencies approximately 20 communication sites to provide voice and data transmission capabilities to personnel in the field.
G	Desert Southwest Transmission Line	118 miles primarily parallel to DPV	Imperial Irrigation District	Final EIR/EIS prepared in 2005. Approved by BLM in 2006.	N/A	New, approximately 118-mile 500 kV transmission line from a new substation/switching station near the Blythe Energy Project to the existing Devers Substation located approximately 10 miles north of Palm Springs, California.
H	Blythe Energy Project, Phase II	Blythe, CA. Near the Blythe Airport and I-10	Blythe Energy, LLC	Approved by CEC in December 2005.	30 acres (located on Blythe Energy Project land)	520 MW combined-cycle power plant located entirely within the Blythe Energy Project site boundary. Blythe Energy Project II will interconnect with the Buck Substation constructed by WAPA as part of the Blythe Energy Project. Project is designed on 30 acres of a 76-acre site.
I	Eagle Mountain Pumped Storage Project	Eagle Mountain iron ore mine, north of Desert Center	Eagle Crest Energy Company	License application filed with FERC in June 2009	1,524	1,300 MW pumped storage project designed to store off-peak energy to use during peak hours. The captured off-peak energy would be used to pump water to an upper reservoir. When the water is released to a lower reservoir through an underground electrical generating facility the stored energy would be added into the Southwestern grid during "high demand peak" times, primarily weekdays. Estimated water use is 8,100 AFY for the first four-year start-up period and replacement water is 1,763 AFY thereafter.
J	Palen Solar Energy Project	North of I-10, 10 miles east of Desert Center	Solar Millennium LLC/Chevron Energy	Approved by CEC in December 2010. BLM expected to issue Final EIS in early 2011. Proposed to have one unit online in 2012 and one unit online in 2013.	5,200	500 MW solar trough project on 5,200 acres. Facility would consist of two 250 MW plants disturbing approximately 3,870 acres. Project would include interconnection to the SCE Red Bluff Substation. Project would use an estimated 300 AFY of water.
K	Blythe Solar Power Project	North of I-10, immediately north of the Blythe Airport	Solar Millennium LLC/Chevron Energy	Approved by CEC in September 2010 and by BLM in October 2010. Construction began in November 2010.	9,400	1,000 MW solar trough facility on 9,400 acres

**Table E-2. Future Foreseeable Projects along the I-10 Corridor (Eastern Riverside County)**

ID # on Fig. E-1	Project Name	Location	Ownership	Status	Acres	Project Description
L	NextEra (FPL) McCoy	Northwest of Blythe, CA, immediately north of BSPP	NextEra (FPL)	Plan of Development in to BLM Palm Springs–South Coast Field Office	20,608	250 MW solar trough project. ROW in process for monitoring water well drilling.
M	McCoy Soleil Project	10 miles northwest of Blythe	enXco	Plan of Development in to BLM Palm Springs–South Coast Field Office	1,959	Revised POD submitted to BLM for solar photovoltaic project.
N	Genesis Solar Energy Project	North of I-10, 25 miles west of Blythe and 27 miles east of Desert Center	NextEra (FPL)	Approved by CEC in September 2010 and by BLM in November 2010. Construction began in January 2011.		250 MW solar trough project on 4,640 acres north of the Ford Dry Lake. Project includes 6-mile natural gas pipeline and a 5.5-mile gen-tie line to the Blythe Energy Center Transmission Line (Buck-Julian Hinds), where the gen-tie line then travels east on shared transmission poles to the Colorado River Substation.
O	Chuckwalla Solar I	1 mile north of Desert Center	Chuckwalla Solar I, LLC	Plan of Development in to BLM Palm Springs–South Coast Field Office	4,083	200 MW solar photovoltaic project on 4,083 acres. Project would be developed in several phases and would tap into an existing SCE 161 kV transmission line crossing the site.
P	Rice Solar Energy Project	Rice Valley, Eastern Riverside County	Rice Solar Energy, LLC (Solar Reserve, LLC)	Approved by CEC in December 2010. Construction to begin in 2011	1,410	150 MW solar power tower project with liquid salt storage. Project is located on approximately 1,410 acres and includes a power tower approximately 650 feet tall and a 10-mile interconnection with the WAPA Parker-Blythe transmission line.
Q	Blythe Airport Solar I Project	Blythe Airport	U.S. Solar	Application has been submitted to City of Blythe, City of Blythe approved the project in November 2009	640	100 MW solar photovoltaic project located on 640 acres of Blythe airport land.
R	Blythe PV Project	Blythe	First Solar	CPUC approved project terms of a 20-year power purchase agreement for sale of 7.5 MW. Under construction in fourth quarter 2009	200	7.5 MW solar photovoltaic project located on 200 acres. Project was constructed by First Solar and sold to NRG Energy.
S	Desert Quartzite	South of I-10, 8 miles southwest of Blythe	First Solar (previously OptiSolar)	Plan of Development submitted to BLM Palm Springs–South Coast Field Office	7,724	600 MW solar photovoltaic project located on 7,724 acres. Adjacent to DPV transmission line and SCE Colorado Substation. Approximately 27 AF of water would be used during construction and 3.8 AFY during operation.



**Table E-2. Future Foreseeable Projects along the I-10 Corridor (Eastern Riverside County)**

ID # on Fig. E-1	Project Name	Location	Ownership	Status	Acres	Project Description
T	Desert Sunlight	North of Desert Center	First Solar	Plan of Development submitted to BLM Palm Springs–South Coast Field Office	4,400	550-MW solar photovoltaic project located on approximately 4,400 acres. Project would tie into the SCE Red Bluff Substation. Approximately 1,400 AF of water would be used during construction and 0.2 AFY during operation.
U	Desert Harvest Project	6 miles north of Desert Center	enXco	N/A	1,057	100 MW photovoltaic plant on 1,057 acres of BLM land. Would require a 5- to 8-mile transmission line to planned SCE Red Bluff Substation.
V	Red Bluff Substation	4 miles east of Desert Center, south of I-10	SCE	Environmental review being conducted concurrently with Desert Sunlight Project EIS. Application for PTC filed with CPUC in November 2010 for expansion.	N/A	Proposed 220/500 kV Substation near Desert Center. Planned to interconnect renewable projects near Desert Center with the DPV transmission line. Preferred location is east of Desert Center; alternate location is west of Desert Center.
X	Eagle Mountain Landfill Project	Eagle Mountain, North of Desert Center	Mine Reclamation Corporation and Kaiser Eagle Mountain, Inc.	US Court of Appeals for the 9th Circuit issued its opinion regarding the EIS for the project in November 2009 and ruled that the land exchange for the project was not properly approved by the administrative agency. Kaiser's Mine and Reclamation is considering all available options.	~3,500	The project proposed to be developed on a portion of the Kaiser Eagle Mountain Mine in Riverside County, California. The Proposed Project comprises a Class III nonhazardous municipal solid waste landfill and the renovation and repopulation of Eagle Mountain Townsite. The proposal by the proponent includes a land exchange and application for rights-of-way with the Bureau of Land Management and a Specific Plan, General Plan Amendment, Change of Zone, Development Agreement, Revised Permit to Reclamation Plan, and Tentative Tract Map with the County. The Eagle Mountain landfill project proposes to accept up to 20,000 tons of non-hazardous solid waste per day for 50 years.
<b>Additional Projects Outside Cumulative Figure Boundaries or Not Analyzed in Cumulative Discussion</b>						
	BLM Solar Energy Zones (SEZs)	Along the I-10 corridor between Desert Center and Blythe	BLM	Proposed	202,896 (eastern Riverside County only)	The DOE and the BLM identified 24 tracts of land as Solar Energy Study Areas in the BLM and DOE Solar Programmatic Draft EIS, published in December 2010. These areas have been identified for in-depth study of solar development and may be found appropriate for designation as solar energy zones in the future.

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Figure E-1. Cumulative Projects

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