

4.0 OTHER ENVIRONMENTAL CONSIDERATIONS

Section 3 presented an assessment of potential direct impacts to specific resources that could result from the Proposed Project and alternatives. This section discusses additional environmental issues associated with the Proposed Project including:

- Relationship between the Local Short-term Use of the Environment and the Enhancement of Long-term Productivity;
- Significant Irreversible and Irretrievable Commitment of Resources;
- Growth Inducing Impacts;
- Cumulative Impacts; and
- Unavoidable Adverse Impacts.

4.1 Relationship Between the Local Short-Term Use of the Environment and the Enhancement of Long-Term Productivity

This section considers the effects of the proposed action that narrow the range of beneficial uses of the environment. The Proposed Project and alternatives would result in a long-term commitment of resources along the length of the corridor and at the substations. Because most of the project would be located in sparsely settled rural areas, the transmission project would preclude, but is not expected to significantly affect, existing residential, commercial, and industrial land uses in the vicinity of the transmission line. Some forms of dispersed recreation may be more limited because of the project and other utilities constructed in the corridor.

The primary resources lost include impacts to soils resulting from erosion of disturbed areas during construction; wildlife habitat in areas committed to facilities, including access and spur roads, tower sites and substations; and land within the right-of-way being available for open space or other future uses. The restriction of the transmission line facilities to an existing and designated corridor would not contribute to long-term fragmentation of habitat. The displacement of wildlife, and reduction in quality of habitat and related productivity of wildlife populations occupying/using that habitat would most affect special-status species including desert tortoise, Coachella Valley milk-vetch, and Coachella Valley fringe-toed lizard.

4.2 Significant Irreversible and Irretrievable Commitment Of Resources

This section considers the effects of the project that would result in a commitment of resources and uses of the environment that could not be recovered if the project were constructed. An irreversible or irretrievable commitment of resources would occur when resources were either consumed, committed, or lost as a result of the project. The commitment of a resource would be “*irreversible*” if the project started a process (chemical, biological, or physical) that could not be

stopped. As a result, the resource or its productivity or its utility would be consumed, committed, or lost forever. Commitment of a resource would be considered “*irretrievable*” when the project would directly eliminate the resource, its productivity, or its utility for the life of the project.

The Proposed Project and the associated state and federal approvals to allow construction of a transmission line within a BLM designated utility corridor would result in construction actions that would alter soil conditions, remove vegetative cover, and possibly degrade or destroy cultural resources.

4.2.1 Soils

Construction of the transmission line could cause long-term compaction of soils within the project right-of-way; however, following construction most of the disturbed soil would be ripped (to relieve compaction). The compaction of these soils may result in changes to the existing soil profiles by mixing which would alter the physical, chemical, and biological characteristic of the soils. This may lead to accelerated wind or water-induced soil erosion, and sedimentation runoff or deposition.

4.2.2 Vegetative Cover

Construction of the Proposed Project would include approximately 1111-1242 acres of temporary disturbance and 148-179 acres of permanent disturbance to vegetative habitat. The amount of time required to achieve full vegetation recovery may potentially range from 10 to 30 years. Climatic extremes, limited rainfall, low nutrient soil conditions, herbivory pressures, and introduction and establishment of noxious plant and weed species may precipitate conditions that impede or prevent full recovery of the disturbance areas. Wildlife dependent on the affected vegetative habitat could be displaced and possibly experience reduced populations. Similarly, after the useful life of the facility, recovery of affected wildlife populations, including some special-status species of plants and animals, would take place over several years and full recovery is not assured.

Within the NECO plan area, the Proposed Project would impact lands within the Chuckwalla DWMA and count against the one percent cumulative disturbance allowance under the adoption of the Final Plan and USFWS Biological Opinion. Specifically, the Chuckwalla DWMA and Category I desert tortoise habitat would experience a loss of approximately 474 acres of temporary disturbance and 24 acres of permanent disturbance. Additionally, approximately 47 acres of temporary disturbance and 2 acres of permanent disturbance, respectively would occur to Category III desert tortoise habitat. Therefore, the proposed project would result in cumulative impacts to approximately 0.05 percent and 0.003 percent of temporary and permanent, respectively, of cumulative disturbance impacts to the 1,020,600-acre USFWS designated critical habitat unit.

Within the CVPA, the project would impact Dry Wash Woodland and Mesquite Communities as well as Desert Scrub Communities. This project would count against the one percent disturbance

allowance under the Plan and Biological Opinion. Loss of these habitats would become more significant within the ACEC and WHMAs in and around the Indio Hills.

4.2.3 Cultural Resources

Due to potential effects on NRHP-eligible cultural resources in the project area, the project would have the potential to create irretrievable losses of significant cultural resources if the mitigation measures identified in Section 3.2 were not implemented. Damage or destruction of these resources would be a significant, irreversible loss of resources important to both scientific understanding and national heritage.

4.3 Growth Inducing Impacts

Section 15126.2(d) of the *Guidelines for Implementation of the California Environmental Quality Act* calls for the consideration and discussion of growth-inducing impacts in an EIR. As it relates to growth inducing impacts, Section 15126.2(d) states:

Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansions of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

As discussed in Section 3.8, Socioeconomics and Environmental Justice, the Proposed Project would require personnel for construction activities that would likely be available from local or regional populations, and would require minimal personnel operational activities. As such, the project would be expected to have very limited or no effects on local populations.

The project would provide increased electrical transmission capability within the region, and, in a broader context, in the western states electrical transmission grid. Use of electric energy is projected to increase substantially over the following decades in California, and in other regions supplied by power through the western grid. Electric power is generated in diverse forms (from hydro-power, fossil fuels, nuclear, geothermal, wind, solar, etc.) at widespread locations throughout the western U.S., and is directed into the interconnected transmission system throughout the western states, Canada, and Mexico. The project would be a part of that transmission grid; however, the project itself would not directly result in the construction of new power plants or increased electricity generation. Given the general status of available supply and the growing demand, the construction of new power generating plants, particularly gas-fired plants, is expected to continue. In that respect, the project would serve to accommodate distribution of some of this new power generation.

The Southern California Association of Governments (SCAG) predicts that Riverside and Imperial Counties will increase in population by 83 and 123 percent, respectively, in the 25-year period from 2000 to 2025 (SCAG's 2001 Regional Transportation Plan). In order to determine electrical transmission or generation needs, planners analyze both power demand in the service area and the reliability of the power system under prescribed outage contingencies. System reliability is often analyzed under conditions of meeting demand when the largest in-area power plant is out of service and there is a simultaneous outage along the single most critical network transmission connection used to import power into the area.

Although this transmission line would not directly induce population growth in this region, this facility would contribute to meeting electrical demand increases and provide for increased system reliability as these human populations expand. The direct relationship of this project to population growth in the region is further complicated by future increases in local power generation, use of conservation measures, and development of other means to transport power into the service area.

Given the wide range of potential future power generation and transmission system development, it would be substantially speculative to conclude that the project would be a direct or indirect catalyst for new generation. Further, such production would require separate approvals from state and/or federal agencies, and would be subject to environmental review and documentation that would consider the potential effects. It has been determined that it would be speculative to attempt to determine the potential growth inducement associated with increase power production, and an assessment of such growth inducement is beyond the scope of this document.

4.4 Cumulative Impacts

NEPA requires evaluation of a proposed action's potential to contribute to "cumulative" environmental impacts. A cumulative impact is defined as:

The impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Cumulative impacts can result from similar projects or actions, as well as from projects or actions that have similar impacts (40 CFR 1508.7).

Existing conditions in the project area reflect changes based on past projects and activities. Much of the project area is rural and relatively undeveloped. However, significant changes to portions of the project area have resulted from activities related to agriculture, mining, water conveyance, transportation infrastructure, electrical power generation and transmission facilities, recreational activities, and residential/commercial development. Currently, in addition to the proposed Desert Southwest Transmission Project, there are two other proposed transmission projects that could be potentially located adjacent to one another within portions of the designated BLM utility corridor between Blythe and Palm Springs. Each of these projects follows portions of SCE's existing Palo Verde – Devers 1 (DPV1) 500 kV transmission line.

First, SCE is proposing to build the DPV2 project, another 500 kV project that parallels the DPV1 line for its entire length. The DPV2 line was previously approved and SCE is currently updating all needed permits and approvals. As stated earlier in this EIS, the Desert Southwest Transmission Project will be located either within a 300-foot corridor adjacent to the DPV2 ROW or within the DPV2 ROW if SCE and DSWTP agree to collaborate to build one joint project.

Blythe Energy is proposing to build a 230 kV line from the Blythe Energy plant to the Julian Hinds substation. It also would follow the DPV1 and DPV2 ROWs for the majority of its length. The Blythe Energy transmission line would be located within the 95 feet immediately adjacent to the DPV2 ROW. The Desert Southwest line would occupy the 190 feet of its proposed 300-foot corridor farthest from the DPV2 ROW, so that all lines could be accommodated. Figure 4-1 shows the relative routes of these transmission lines and Figure 4-2 shows the relative locations of their proposed ROWs within the BLM utility corridor where all four lines would be co-located.

Table 4-1 lists a number of both general activities and specific projects that have or can reasonably be anticipated to occur within the project area. Table 4-1 also provides a listing of the ongoing, anticipated or likely effects of these projects that may contribute to cumulative impacts when considered in conjunction with the Proposed Project, as presented in Section 3 of this EIS. Table 4-2 identifies the individual and total temporary and permanent land disturbance for the three transmission line projects proposed in the project area.

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Figure 4-1 Locations of DVP1, DVP2, DSWTP, and Blythe Energy Transmission Lines

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Figure 4-2 Right-of-Way Locational Relationships Among DSWTP, Blythe Energy, PVD-1, and PVD-II Transmission Lines

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**Table 4-1
Projects and Activities with Potential to Contribute to Cumulative Impacts**

Activity and Location	Description	Potential Resource Impacts												
		Biological Resources	Cultural Resources	Air Quality	Water Resources	Geology and Soils	Visual Resources	Land Use	Socioeconomics	Noise	Traffic & Transportation	Public Health & Safety	Paleontological Resources	Wilderness/Recreation
Present Projects or Activities														
Agriculture, Palo Verde & Coachella Valleys	Irrigation dependent agriculture in the Palo Verde and Coachella Valleys. Crops include cotton, alfalfa, onions, and melons.	v		v	v					v				
Mining	BOR-operated rock quarry.	v					v	v		v				
Recreation	Camping, fishing, OHV-based recreation.	v	v	v			v	v	v	v				
Water Diversion	Use of water from the Colorado River for agriculture and municipalities.	v						v	v					
Reasonably Foreseeable Future Projects or Activities														
Devers- Palo Verde No. 2	Southern California Edison Company (SCE) is proposing to construct a new 230-mile, high-voltage electric transmission line between California and Arizona, within SCE's existing transmission corridor, parallel to an existing transmission line. The new line would also require upgrades to some of SCE's existing electrical transmission facilities in California.	v	v	v			v	v	v	v	v	v	v	
Blythe Energy Project Transmission Line Modifications	There are two distinct components to the proposed BEP transmission line modifications: 1) Buck to Julian Hinds Transmission Line Component, which includes: upgrades to Buck Substation, installation of approximately 67.4 miles of new 230 kilovolt (kV) transmission line between the Buck Substation located adjacent to the BEP and the Julian Hinds Substation located approximately sixty miles to the west, and upgrades to the Julian Hinds Substation; and 2) Buck to Devers-Palo Verde Transmission Line Component, which includes: upgrades to Buck Substation, installation of approximately 6.7 miles of a new 230 kV transmission line (initially operated at 161 kV) between the Buck Substation and SCE's existing D-PV 500 kV transmission line, and construction of a new 161 kV to 500 kV substation ("Midpoint Substation") at the point of interconnection with SCE's existing D-PV 500 kV transmission line.	v	v	v			v	v	v	v	v	v	v	

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AT&T NexGen Fiber Optic Project	A proposed fiber optic line that, in the project area, would follow a route roughly parallel to the northern half of the proposed NBP project route. The project is currently undergoing CEQA/NEPA review, and, if approved, is likely to be constructed before the NBP Project.	v	v							v				
North Baja Pipeline Project – Arizona & California	This project has been constructed. The project involved the construction and operation of about 79.9-miles of 36- and 30-inch-diameter pipeline.	v	v	v				v	v	v	v	v	v	v
BCP and SEP Transmission Line Projects – Calexico/Mexicali, California	Construction of two new 230-kV overhead transmission lines across the Mexico-United States border adjacent to an existing transmission line west of Calexico/Mexicali. The U.S. Department of Energy is preparing environmental assessments for both projects.	v	v						v					
Blythe Energy Center – Blythe, California	A proposed 520-MW power plant under development just northwest of Blythe, California is scheduled to begin operation by April 2003. Natural gas to fuel the project would be supplied via an interconnect with the SoCal system and/or El Paso system.	v		v				v	v	v	v			
Gasoducto Bajanorte Project - Baja California, Mexico	Construction of 135-mile-long pipeline in Baja California, Mexico.	v		v						v	v			
Imperial Mine – East Imperial County	An EIS for a proposed 1,600-acre gold mine in eastern Imperial County is currently being prepared by the BLM.	v	v					v	v	v	v			v
Level 3 Fiber Optic Project – San Diego, Imperial County	A proposed fiber optic line with a route roughly parallel to I-8. This project is likely to begin construction in early 2001.	v	v							v				

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Mexicali Power Plants – Mexicali, California and Baja California, Mexico	Construction of four power plants (250-, 500-, 600-, and 750-MW combined-cycle) near Mexicali, Baja California, Mexico.	v		v			v	v	v					
Otay Mesa Generation Project – South San Diego County, California	Construction of a 500-MW combined-cycle power plant in San Diego County, California.	v		v			v	v	v					
Palo Verde Nuclear Plant 500 kV Intertie -	A proposed Intertie that would run east-west from near Phoenix, Arizona through the southern part of the NBP Project area. The project is currently in the planning stage.	v		v			v		v					
Presidente Juarez Power Plant – Tijuana, Mexico	Conversion of existing 320-MW liquefied petroleum gas-fired and 200-MW oil-fired electricity generation units to natural gas and a new 550-MW natural gas-fired unit in Tijuana, Mexico.			v					v					
Yucca Power Plant – Yuma, Arizona	There are plans to expand the Yucca Power Plant in Yuma, Arizona. Expansion of the plant is currently limited by existing pipeline capacity constraints. Expansion would require an additional 85 MMcf of natural gas.			v				v	v	v				
92-kV EO Transmission Line Project - Rockwood Substation to Imperial Substation, California	IID proposes to construct, operate and maintain a single-circuit 92-kV electrical transmission line between the Rockwood Substation and the Imperial Substation as an upgrade to the existing 34.5-kV MR Transmission Line. The proposed 92-kV EO Transmission Line would physically replace the existing 34.5-kV MR Transmission Line in the same utility corridor.	v	v	v		v	v			v	v		v	v

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92-kV EO Transmission Line Project – Brawley, California	IID proposes to build a new 92-kV transmission line in southern and rural Brawley.	v	v	v		v	v			v	v		v	v
Imperial Irrigation District 230-kV Transmission Loop to Avenue 42 Substation – Riverside County, California	IID proposes to construct, operate, and maintain a new 2.5-mile double circuit 230-kV transmission line in Riverside County. Most of the new line would be within the Indio city limits and the northern portion would be within unincorporated Riverside County. The transmission line will be located parallel to, and on the west side of, Madison Street from the District's Avenue 42 Substation northward to the District's existing KV transmission line. The Avenue 42 Substation will be modified to accommodate the incoming electric power to the substation. Transmission line termination facilities will be constructed within the existing footprint of the substation site.	v	v	v		v	v			v	v		v	
IID Mirage Substation Project – Imperial County, California	IID proposes to build the IID Mirage Substation adjacent to the existing SCE Mirage Substation.	v	v	v		v	v	v		v	v		v	
Westmorland Substation Project – Westmoreland, California	IID proposes to build a new 92-kV Westmorland Substation and dismantle the existing Westmorland Substation.	v	v	v		v	v			v	v		v	

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Projects and Activities with Potential to Contribute to Cumulative Impacts**

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BP Ventures Beef Processing Facility Power Up Project – Brawley, California	IID has been requested to provide electrical power to the BP Ventures Beef Processing Facility located in Brawley, California. The project includes construction power (adding an additional conductor to an existing distribution line which parallels the railroad), temporary/back-up power (rebuilding the existing 34.5-kV BP transmission line and converting it to a 7.2/12.47-kV distribution circuit for 3,600 feet along Shank Road), and operational power (extending the 92-kV J transmission line from Best Road 2,800 feet west along Shank Road to a new substation which will be located in the BP Venture Beef Processing Facility).			v			v	v	v	v	v	v		
K through 12 Education Park Project (1) – Riverside County, California	The Coachella Valley Unified School District proposes the construction of an elementary school (K-6), middle school (7-8), and high school (9-12) on an 87-acre parcel. The project is located in the northeast corner of Tyler Street and Avenue 66 of Section 9, Township 7 South, Range 8 East. The maximum student capacity for the Education Park is 5,292 students; 1,750 for the elementary school; 1,178 for the middle school; and 2,364 for the high school.			v			v	v	v	v	v	v		
Kohl Ranch Specific Plan (2) – Riverside County, California	The Kohl Ranch Specific Plan area is located between Avenues 60 and 68 east of Harrison Street. The plan proposes a number of residential, business, commercial, industrial, open space/recreation, and public facilities. Business, commercial, and industrial uses account for approximately 158, 63, and 358 acres, respectively. Open space use accounts for approximately 412 acres, and public facilities are proposed on 27 acres. The residential portion includes 7,171 dwelling units on 965 acres, with a gross residential density of roughly five dwelling units per acre.	v	v	v	v	v	v	v	v	v	v	v	v	v

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Mobile Home Park – General Plan Amendment and Plot Plan – Riverside County, California	The project proposes a general plan amendment (GPA No. 524) for a change of land use designation and requests a conditional use permit for a 106-space mobile home park on 30.1 acres at 62-600 Lincoln Street in the township of Thermal. The project was approved with an Environment Assessment by the Riverside County Board of Supervisors in May 2000, and project proponents are actively seeking building permits. In addition, a proposal for a 31-unit apartment complex on 3 acres adjacent to the proposed mobile home park was approved in early 2001. The project applicant is in the process of obtaining building permits (Riverside County Planning Department – Desert Office 2001)			v	v	v	v	v	v	v	v	v		v
88 Single-Family Homes Located at Avenue 64 and Lincoln Street (4)	The project proposes a change of zone from A-1-5 to R-6 for 88 single-family residential units on 20 acres (Tentative Tract Map No. 28436). The project proposes a density of 4.4 dwelling units per acre. The project area is located east of Lincoln Street and south of Avenue 64 in Section 8, Township 7 South, Range 9 East.													
67 Residential Lots Located at Avenue 66 and Johnson Street (5)	This project proposes a change a zone from R-1 to R-6 and division of 13.5 acres into 67 residential lots plus two drainage lots and two common lots (Tentative Tract Map no. 29165). The project proposes a density of five dwelling units per acre. The project area is located north of Avenue 66 and west of Johnson Street in Section 8, Township 7 South, Range 9 East San Bernardino Base and Meridian.							v		v	v			

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McNaughton Specific Plan – Coachella, California	The McNaughton Specific Plan proposes residential, commercial, recreation, and hotel development on 1,877 acres south of I-10 in the City of Coachella. The Specific Plan area extends east from the terminus of Avenues 50 and 52 with the Coachella Canal and south from I-10 to the Coachella City boundary. Residential development is designated on 919 acres. Commercial, recreation, and hotel development account for approximately 175, 708, and 75 acres, respectively.	v	v	v	v	v	v	v	v	v	v	v	v	v
Desert Lakes Development Project (10) – Coachella, California	The Desert Lakes Development Project proposes an amendment to the City of Coachella General Plan to annex 6,226 acres (1,074 acres within the city sphere of influence and 5,136 acres outside the city sphere of influence) for the development of residential, commercial, and open space/conservation facilities. The project area is located primarily north of I-10 and east of the Coachella Canal with the maximum extent of its boundaries 2 miles north of I-10 and 4 miles east of the Coachella Canal. Additional sections of the project area are located in Township 6 South, Range 9 East 6 (all of Section 6) and township 6 South, Range 8 East (eastern half of Section 12). Residential development is designated on 4,394 acres. Commercial and open space/conservation uses account for approximately 1,411 and 325 acres, respectively.	v	v	v	v	v	v	v	v	v	v	v	v	

**Table 4-2
Proposed Transmission Line Projects Approximate Land Disturbance**

	Temporary (acres)	Permanent (acres)
DSWTP	1013*	163*
DPV2	841	42
Blythe II	117	132
Total	1971	337
*Average		

The following subsections discuss potential cumulative impacts that would generally be associated with the projects identified in Table 4-1 when considered cumulatively with the various resource impacts addressed in Section 3 of this document. In addition, as described in Sections 1 and 2, in response to comments received on the Draft EIS/EIR, a minor variation to the Proposed Project was developed (referred to as Variation PP1). Variation PP1 would remain in the same general alignment as the Proposed Project but would be shifted south approximately 150 feet into SCE's existing and approved DPV2 right-of-way. Therefore, unless noted below, the resource impacts of Variation PP1 would be similar to those identified for the Proposed Project.

4.4.1 Biological Resources

4.4.1.1 Vegetation

Cumulative impacts on vegetation resources would include increased disturbance of plant communities, loss of vegetative cover, and the potential for the introduction and dispersal of noxious weeds during construction, operations, and maintenance of the Proposed Project.

Temporary and permanent destruction of vegetation is unavoidable at tower pads, stringing and tensioning sites, and spur roads. Table 4-3 lists temporary and permanent disturbance for the Proposed Project. Additionally, natural revegetation processes may take up to 30 years to successfully restore those construction areas that were temporarily disturbed.

**Table 4-3
Proposed Project Land Disturbance by Project Feature**

Project Feature	Acres Disturbed During Construction	Acres to be Restored	Acres Permanently Disturbed
Structure Sites ^a	914 - 1,020	866 - 966	48 - 54 ^a
Access Roads ^b	26 ^b	6	20
Staging Areas	28	28	0
Pull Sites ^c	63	63	0
New Substation/Switching Stations (2)	75 - 100		75 - 100
Devers Substation (expansion)	5		5
Total Estimated	1111-1242	963-1063	148-179

^a Area at structure sites include short spur roads from the existing Devers-Palo Verde Transmission Line maintenance road.

^b New access roads would be required and some existing roads would require upgrades to allow passage of heavy equipment to set structures and deliver concrete.

^c Pull sites are areas at which equipment utilized for installation of transmission line wires would be temporarily located during construction.

4.4.1.2 Wildlife/Special-status Species

Construction activities will result in permanent loss of food, shelter, and nesting/breeding areas on tower pads, spur roads, and stringing and tensioning sites. Secondary impacts will occur to all wildlife species, particularly the desert tortoise from the increase in human activities and displacement from the construction right-of-way. The reduction of desert tortoise habitat and potential for direct mortality is a significant cumulative impact. However, the impacted acreage will be compensated at a 5:1 ratio and will allow for the purchase of private land that can be effectively managed to implement desert tortoise recovery goals.

4.4.2 Cultural Resources

Impacts to significant cultural resources would be mitigated with each project constructed. Significant resources that could be affected by construction activities would be avoided, or if this is not possible, recovered for scientific value. Therefore, the cumulative impacts to significant cultural resources can be mitigated below a level of significance.

4.4.3 Air Quality

The IID transmission line and additional utilities in the utility corridor would add to exhaust emissions and particulate during construction periods. As new construction would be staggered over time, dust and other emissions would be dispersed in time and location. Within the study area there are many areas that are sparsely developed, especially along the corridor, and there are few sensitive receptors in the area. With mitigation to control dust and other emissions, the IID project would contribute little to local air quality pollution, especially in relation to large emission sources such as industries and vehicle traffic on highways. Therefore, the cumulative effects on air quality is considered less-than-significant. From a regional perspective, other uses such as highways, industry growth, and other developed land uses produce substantial emissions of particulate, NO_x, CO, and other air pollutants. Long-term operation of the IID project and other transmission projects would generate almost no direct emissions of air pollutants. Particulate generation from disturbed soils may continue until construction areas are revegetated. For these reasons, there would be very little in the form of additive air quality effects resulting from the proposed action. Therefore, the cumulative impact is deemed to be less-than-significant.

4.4.4 Water Resources

Potential impacts of the Proposed Project on water resources as described in Section 3.4 would generally be expected to be similar for other construction projects within the corridor and in the immediate vicinity. These include:

- Potential spills and contaminant discharges during construction;
- Sediment discharges in water courses from construction;
- Obstruction and alteration of water courses;

- Increased runoff from soil compaction, possibly affecting flood flows;
- Construction activities affecting the flow of springs and wells; and
- Flood and flash flood hazards to structures.

Cumulative impacts related to contaminant and sediment discharges, soil compaction, and associated runoff effects would occur in and downstream of disturbance within the project area. Highways, roads, and railroads in the vicinity of the project also present significant environmental disturbance and potential for contaminant discharge because of grading and regular deposition of vehicle contaminants (e.g., fuel, fuel additives, oil, solvents, metals, rubber and others) on road surfaces, as well as occasional accidental spills of hazardous materials. Cumulative landscape alteration of other projects that may occur within the project area is expected to present a much greater potential for discharges into water courses than that associated with the project. It is assumed that new construction associated with other projects would meet federal, state, and local permit requirements, in a similar manner as required for the Proposed Project, and would include mitigation measures similar to those identified in Section 3.4. As such, the potential cumulative impacts are considered to be less-than-significant.

4.4.5 Geology and Soils

4.4.5.1 Geology

As discussed in Sections 2 and 3, the project would require some grading and topographic alteration as a result of access roads and construction equipment requirements. Existing highways, roads, and railroads in the project area have resulted in significant localized or linear topographic alteration because of the need to establish appropriate grades and alignments. While the amount of grading and topographic alteration from mines, quarries, roads, and railroads in the project area is not quantified, together they present much greater topographic alteration than that which would be associated with the project.

The project would require minor grading at isolated localities, primarily at sites for support tower pads and local dirt access roads located on steeper slopes in the hills and mountains. However, large cuts and fills typically associated with mining and transportation corridors would not be necessary for the Proposed Project. Future activities in the project area may result in substantial changes in topography; however, these specific changes and their impacts are speculative at present.

Geologic hazards (e.g., earthquakes, landslides, and unstable slopes) are present throughout the region, but present generally localized potential for damage to facilities. Development results in exposure of people and property to these hazards. Development of the Proposed Project parallel to existing transmission line rights-of-way would present the potential for localized seismic activity to damage two or more transmission lines. However, because of requirements for adequate spatial separation of the transmission lines, the Proposed Project would not increase the potential for seismic damage to occur to adjacent facilities. Therefore, the cumulative impact is considered less-than-significant. Other development in the project area could also result in exposure of property and people to geologic hazards. As the hazards are site-specific, the project would not have additive effects.

4.4.5.2 Soils

Cumulative impacts related to soil erosion and compaction would occur in disturbance areas shared by the Proposed Project and other activities. Cumulative impacts could include:

- Increased soil erosion and soil compaction in the project area,
- Disturbances to water resources by erosion and sedimentation, and
- Decreased potential for revegetation/reclamation success.

These impacts would occur for other projects constructed within the project area. Other projects in the region represent dispersed sources of past, existing and future soil erosion, depending on local conditions. The impacts of the Proposed Project would be less than significant with implementation of mitigation measures identified in Section 3.5 and reclamation success criteria to be provided in the COM Plan, as applicable. Other projects within the project area would have a similar or greater potential for soil erosion and compaction. It is expected, although not assured, that new projects would be substantially reduce sources of soil erosion because of current and future requirements for erosion control and site restoration enforced through federal, state, and local permits. Therefore, the cumulative impacts of the project and plan amendments on erosion are primarily the additive effects of minor increments to existing soil erosion problems in the project area. For this reason, the cumulative impacts of the Proposed Project are considered less-than-significant. No additional mitigation is required.

4.4.6 Visual Resources

The majority of the Proposed Project transmission line corridor is located in VRM Class III and IV areas, and the types of construction-related disturbance described above would be generally consistent with the established management objectives for Class III and IV areas. Therefore, with the implementation of a BLM-approved Reclamation Plan, cumulative visual impacts are not anticipated to be significant.

4.4.7 Land Use

As stated in Section 3.7, the Proposed Project would be consistent with applicable land use plans and policies of the federal, state, and local governments with jurisdiction over the land in the project area; therefore, no cumulative effects on land use would occur as a result of the project.

4.4.8 Socioeconomics and Environmental Justice

The Proposed Project would generate additional tax revenues for local governmental agencies, as well as temporarily increase levels of local employment. These are considered beneficial impacts, and would contribute cumulatively to other similar beneficial impacts in the project area. No impacts related to environmental justice were identified for the Proposed Project. As such, no cumulative effects on low income and minority communities would occur as a result of the project.

4.4.9 Noise

Construction of the Proposed Project would temporarily add to ambient noise levels. These impacts would be localized and temporary. The addition of construction noise to ambient levels would contribute cumulatively to the existing noise environment, as discussed in Section 3.9. Potential additional cumulative impacts could occur if activities associated with future development or maintenance of existing facilities were to occur simultaneously with construction of the Proposed Project. The potential for such an occurrence is low and would not be expected to result in significant impacts.

Project noise during operation would occur to a minimal degree and would be associated primarily with the low-frequency hum of transmission lines during wet or humid weather. Transmission line noise decreases quickly with distance away from the line. Given the sparsely developed nature of the corridor and the few sensitive receptors in the area, the cumulative effect of such noise is considered less-than-significant.

4.4.10 Traffic and Transportation

Traffic and transportation impacts from the Proposed Project would primarily consist of those associated with construction activities. Increases in project area traffic would occur as a result of construction traffic; however, due to the existing low levels of traffic volumes on area roadways, this impact would be minimal. It is possible that traffic increases associated with existing activities or future projects could coincide with construction of the Proposed Project, which would result in cumulative increases in traffic within the project area. However, such cumulative increases would not be expected to result in reductions of existing levels of service, and are considered to be less-than-significant.

4.4.11 Public Health and Safety

The Proposed Project would additively increase EMF, hazardous materials, and fire hazards in the study corridor. People living and working near the corridor, and people driving on nearby roads and working in mines could potentially be affected. However, the facility designs, clearance requirements, and distance separations for adjacent transmission lines would reduce these potential cumulative impacts to a less-than-significant level. The use, storage, and disposal of hazardous materials for this and other projects in the study area are subject to federal, state, and local hazardous materials health and safety laws.

4.4.12 Paleontological Resources

Development of the Proposed Project may disturb previously undocumented paleontological resource sites. Significant resources that could be affected by construction activities would be avoided, or if this is not possible, recovered for scientific value. Therefore, the cumulative impacts to significant paleontological resources can be mitigated below a level of significance.

4.4.13 Wilderness/Recreation

The Proposed Project when viewed in conjunction with other utilities that may be placed in the utility corridor, could cumulatively diminish the recreational experience, especially for dispersed recreational areas. Future utilities in the corridor would reduce the appearance of undeveloped open space and preclude these areas from possible future consideration as wilderness. The utility corridor also may preclude some forms of dispersed recreational use. However, the Proposed Project and alternatives would not traverse any wilderness or wilderness study areas. For these reasons, the Proposed Project would likely have a less-than significant cumulative effect on recreation/wilderness.

4.5 Unavoidable Adverse Impacts

No unavoidable adverse impacts were identified for Proposed Project or Alternatives.