CH#	Pg#	Par#	Comment	
E.1.2	20-22	1	The EIR/EIS assumes presence of sensitive plant species which may or may not be present within potential impact areas. The project design should be finalized and focused rare plant surveys should be conducted during suitable field conditions to determine presence/absence of sensitive plant species. Require mitigation based upon the results of detailed rare plant surveys and final project design and state that this process will occur.	E0003-102
E.1.2.3	25	1, 2	The EIS/EIR states "These impacts are significant according to Significant Criterion 1.c. (substantial adverse effect on FTHL MAs) and Significant Criterion 1.f. (directly or indirectly cause the mortality of a special status wildlife species). These impacts are significant and not mitigable to less than significant levels (Class I) because it is unknown if enough mitigation land is available to compensate for the impacts. Implementation of Mitigation Measures B-1a, B-1c, B-2a, B-7a, and B-7b is required to, at least in part, compensate for impacts to the FTHL and its habitat." SDG&E is committed to compensate for impacts to FTHL at ratios determined by the Flat-Tailed Horned Lizard Rangewide Management Strategy (Flat-Tailed Horned Lizard Interagency Coordinating Committee, 2003) and it is SDG&E's responsibility, working with land management agencies, to identify mitigation land; therefore, the assumption that mitigation lands are not available is speculative. This impact is mitigable and should be classified as a Class II impact, not a Class I impact.	E0003-103
E.1.2	25,26	2nd to last paragrap h	The draft EIR/EIS states under Impact B-7B that the project would result in: "Direct or indirect loss of Peninsular bighorn sheep or direct loss of habitat (Class I)" and overstates this impact by making the erroneous assumption that "the species is assumed to occur throughout the designated PBS critical habitat." Yet there are no bighorn sheep sightings along the proposed I-8 alternative where it passes south of, but not through, the Coyote Mountains. This area is marginal habitat consisting of rolling hills beyond the toe of the slope where bighorn sheep occur. The EIR/EIS must acknowledge that Critical Habitat for this DPS is being revised, in part, because the U.S. Fish and Wildlife Service wanted to "more precisely define" Primary Constituent Elements for this DPS and incorporate bighorn location data (U. S. Fish and Wildlife Service 2007). The section D.2.11, eight PBS ewe groups are known to occur (USFWS, 1999a). The southernmost known PBS ewe group occurs north of I-8 in Carrizo Canyon, which includes portically, a ewe group occurred along the Mexican border, but has disappeared since the 1980s; the loss was poorly documented but was likely the result of the construction of I-8 in the mid-1960s, railroad activity, livestock grazing, poaching, and fire suppression (USFWS, 2000a). The I-8 Alternative would cross through two areas where there are known PBS sightings, In-ko-pah Gorge and the Coyote Mountains. These areas are considered part of the Carrizo Canyon ewe group. Although no PBS was observed during vegetation mapping and rare plant surveys, the species is assumed to occur throughout the designated PBS critical habitat."	E0003-104

CH#	Pg#	Par#	Comment	
E.1.2	25	2nd to	The EIR/EIS cites a number of hypothetical causes for bighorn sheep	
		last	extirpation south of I-8 but does not include human use of waterholes and	E0003-105
		paragrap	disease from domestic livestock, including respiratory disease spread by	
		h	dispersing bighorn: "the loss was poorly documented but was likely the result of	
			the construction of I-8 in the mid-1960s, railroad activity, livestock grazing,	
			poaching, and fire suppression (USFWS, 2000a)." The two additional	
			hypothetical causes of extirpation: 1) human use of waterholes and 2) disease,	
			both have very plausible cause and effect mechanisms. Bighorn sheep can be	
			excluded from water sources during human occupancy (Jorgensen 1974;	
			Campbell and Remington, 1981) and livestock disease, including respiratory	
			pathogens carried by infected bighorn sheep, infected much of the Peninsular	
			Ranges (Elliot et al. 1994).	

E.1.2263The EIR/EIS speculates that: "It is unknown whether I-8 Alternative access roads, tower structures, or other project features would be perceived by PBS as barriers." However, no such barrier effect has been described from the Kofa Mountains (Arizona) or Old Dad Mountains (California) where transmission lines pass through areas used by bighorn sheep (Smith et al. 1986). Following is more supporting information that transmission lines do not impact PBS: Once constructed, powerlines and support structures are inanimate objects in the environment. There is no empirical evidence that powerline. Research on bighorn sheep prior to, during construction, and during operation of the 500kv Palo Verde Devers No. 1 transmission line through Kofa National Wildlife Refuge in 1982 showed only a minor, transient effect on bighorn sheep. The overall conclusion by Smith et al. (1986) was: "To summarize the preceding material, it appears generally that construction and operation of the Palo Verde to Devers 500kV Line 1 had little negative impact on bighorn populations in the Dome Rock Mountains, New Water Mountains, or the Livingstone Hills." Also, "There were no clear indications that construction or operation of the line caused nearby resident sheep to abandon or even move normal home areas.	CH#	Pg#	Par#	Comment	1
<ul> <li>appeared to be drawn to construction activity."</li> <li>There has also been no demographic effect. From 1957 through 2006, 569 bighorn sheep were captured and removed from Kofa National Wildlife Refuge for translocations. The Arizona Game and Fish Department has regularly issued 5 - 17 hunting permits a year since 1960 and has achieved 89 percent success rate over the past 20 years (Kofa National Wildlife Refuge and Arizona Game and Fish Department past 20 years (Kofa National Wildlife Refuge and Arizona Game and Fish Department 2007). These populations have been consistently over 800 individuals for nearly two decades post construction. Only recently, have these populations undergone a decline for other reasons. An investigate report by the Arizona Game and Fish and Kofa National Wildlife Refuge concluded that the decline was due to drought and mountain lion predation. The powerline is not mentioned as a possible cause of decline.</li> <li>A similar example can be found in the Old Dad Mountains in the Mojave Desert where a transmission line traverses occupied bighorn sheep habitat. This population has been the source of numerous bighorn sheep translocations and trophy ram hunting since the 1980s.</li> <li>It should be clear from the examples above that powerline construction has only a temporary effect on bighorn sheep management. This impact should be changed to Class II and Class III.</li> </ul>		Pg# 26	1911	The EIR/EIS speculates that: "It is unknown whether I-8 Alternative access roads, tower structures, or other project features would be perceived by PBS as barriers." However, no such barrier effect has been described from the Kofa Mountains (Arizona) or Old Dad Mountains (California) where transmission lines pass through areas used by bighorn sheep (Smith et al. 1986). Following is more supporting information that transmission lines do not impact PBS: Once constructed, powerlines and support structures are inanimate objects in the environment. There is no empirical evidence that powerline. Research on bighorn sheep prior to, during construction, and during operation of the 500kv Palo Verde Devers No. 1 transmission line through Kofa National Wildlife Refuge in 1982 showed only a minor, transient effect on bighorn sheep. The overall conclusion by Smith et al. (1986) was: "To summarize the preceding material, it appears generally that construction and operation of the Palo Verde to Devers 500kV Line 1 had little negative impact on bighorn populations in the Dome Rock Mountains, New Water Mountains, or the Livingstone Hills." Also, "There were no clear indications that construction or operation of the Palo Verde to the contrary, several individual sheep most directly affected actually appeared to be drawn to construction activity."	E0003-106

CH#	Pg#	Par#	Comment	
E.1.2	26	4	The EIR/EIS relies on speculation to support its conclusion that impacts are significant and not mitigable: "As mentioned in Section D.2.11, human and construction activity and project features in PBS habitat could cause bighorn to avoid affected areas and could interfere with the use of resources such as escape terrain; water; mineral licks; rutting, lambing, or feeding areas; the use of traditional movement routes, and/or could cause physiological stress or increased predation, all of which could adversely affect survival and recovery of the species. These impacts are significant according to the following Significance Criteria: 1.a.) Substantial adverse effect through any impact to one or more individuals of a federal or State listed species; 1.f.) Substantial adverse effect by any impact that directly or indirectly causes the mortality of special-status wildlife species; 4.a.) Substantial adverse effect by preventing access to foraging habitat, breeding habitat, water sources, etc.; 4.b.) Substantial adverse effect by interfering with connectivity between blocks of habitat or block or interfere with a wildlife corridor; and 4.c.) Substantial adverse effect by fragmenting a species' population. Based on the high sensitivity of this species and evidence that shows that human activities significantly affect it, these impacts would be significant and not mitigable to less than significant levels (Class I)." Suggest changing impact to Class II.	E0003-107
E.1.2.3	30	4, 5	The EIS/EIR states that Impact B7h applies to the golden eagle for this alternative for two known golden eagle nests: " Impacts to this eagle pair would be significant and not mitigable to less than significant levels (Class I) because of the distance between the nest area and the project (less than 4,000 feet) and the direct line-of-sight that would occur. Implementation of Mitigation Measure B-7h, which states that no construction or maintenance activities shall occur during the eagle breeding season, is still required to minimize the impact, however." This impact should be categorized as Class II because a 4,000 foot buffer is arbitrary and does not seem to have any citations to back it up. Typically, raptor nests (including eagle nests) have a buffer of 1/4 to 1/2 mile around them only when active. Therefore, if SDG&E conducts nesting surveys during the appropriate season and finds an active nest, they could avoid construction within 1/4 mile during nesting season and not disturb the eagles. If the nest is inactive, there should be no restrictions on construction even during nesting season. 2) SDG&E would avoid construction within the buffer zone at active eagle nests. This is a Class II impact that is mitigable to less than significant levels by surveying for and avoiding active nests.	E0003-108

CH#	Pg#	Par#	Comment	
CH# E.1.2; E.2.2; E.3.2; E.4.2; E.5.2	E.1.2- 30, E.2.2- 13, E.4.2- 15, E.5.2- 58 (Golde n Eagle disturb ance and set back discuss ed 14 more times in this	Par# 2,4,1,1	<ul> <li>The EIR/EIS describes Impact B-7H as follows: "Direct or indirect loss of golden eagle or direct loss of habitat (Class I for nests within 4,000 feet; Class II in existing transmission corridor) and impacts to active nests can be mitigated to less than significant levels by limiting construction activities within 4,000 feet of a nest during the nesting season." This should be a Class II impact based on the following discussion:</li> <li>The literature does not support this Impact Conclusion and Proposed Mitigation. Specifically, human disturbance (B-7H), especially noise from construction and maintenance of the power line on birds, in particular raptors such as the golden eagle, is not supported by the literature. See examples below.</li> <li>1. Birds are unlikely to hear the construction noise from building the power line. They have narrower auditory ranges than humans. This is true not only for Golden Eagles but also for the grasshopper sparrows, Northern Harrier, Southern California Rufous-Crowned Sparrow, White-Tailed Kite, and the Yellow Warbler referenced in the EIS/ EAR. Please refer to:</li> <li>a. Dooling, R.J. (2002) Avian Hearing and Avoidance of Wind Turbines. National Research Energy Laboratory. Technical Report NREL/TP-500-30844.</li> <li>b. Dooling, R.J. 2007. The Effects of Highway Noise on Birds. The California Department of Transportation, Division of Environmental Analysis.</li> </ul>	E0003-109
	)		<ul> <li>Sacramento, California.</li> <li>c. Yamazaki, Y., H. Yamada, M. Murofushi, H. Momose, and K. Okanoya.</li> <li>YEAR? Estimation of hearing range in raptors using unconditioned responses.</li> <li>Ornithological Science 3:85-92.</li> <li>2. Studies by Craig and Craig 1984 (Craig, T. H. and E.H. Craig. 1984. A</li> <li>Large Concentration of Roosting Golden Eagles in Southwestern Idaho. Auk</li> <li>101:610-613) showed high tolerance for human activity directly below where</li> <li>Golden Eagles roosting on power lines. During the road censuses next to</li> <li>transmission lines for a large concentration (&gt;700) of roosting Golden Eagles in</li> <li>Idaho, the authors noted that "most birds remained perched as we passed</li> <li>them" and were not disturbed by vehicular traffic and observers close to their perching locations.</li> </ul>	
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CH#	Pg#	Par#	Comment
[continu ed from previous ]			<ul> <li>3. Studies by Stalmaster and Newman 1978 (Stalmaster, M. V. and J.R. Newman. 1978. Behavioral Responses of Wintering Bald Eagles to Human Activity. Journal of Wildlife Management 42:503-513) show that eagles are tolerant to non-threatening human activity and become acclimated to it. Acclimation to human activity is common in birds. Vegetation and topographic conditions reduce the potential disturbance even further. This study and studies on wading birds show that the mere presence of human activity may not be disturbing to birds if it is not directed at them, e.g. walking parallel to a particular bird (non-threatening) versus walking directly at a particular bird (threatening activity). Construction and maintenance of the power line will not be directed at Golden Eagles and should not be considered a threatening activity.</li> <li>4. Richardson and Miller 1997 (Richardson, C.T. and C.K. Miller. 1997. Recommendations for Protecting Raptors from Human Disturbance: a Review. Wildlife Society Bulletin 25: 634-638) cite studies that also show that the flushing distances of Golden Eagles are also quite small. Eagles are somewhat</li> </ul>
			less tolerant to human activity than vehicular distances, but flushing distances are less than 1,000 feet. The impact analysis needs to be updated to reflect a Class II impact for nests and proposed mitigation should be updated as follows. Mitigation using a 4,000-ft buffer is not justified by the literature. The document should propose a specific and realistic buffer for Golden Eagles found along the Sunrise Powerlink that should be developed based on an in-depth literature review and evaluation of site specific conditions along the proposed corridors, e.g. actual habitat buffers between construction activities and known locations of Golden Eagle nests. This analysis would result in specific setback recommendations that SDG&E could use to develop appropriate mitigation. In general we recommend a buffer of up to 1/4 mile for active nests. Activities that would occur within 1/4 mile of an active should not be prohibited, however, especially in areas where the activities are screened by natural topography or vegetation (obstructed view). These cases could be monitored by a qualified raptor biologist to provide construction flexibility; if the biologist determines that
			construction activities are not disturbing the nest, construction could continue. The biologist could stop work if the nest was deemed to be disturbed. Another alternative would be to use the study methods developed by Stalmaster and Newman 1978 to determine what the actual flushing distances are for Golden Eagles and recommend specific buffers and other mitigation for construction and operation of the power line.

3-3027