

E.4.2 Biological Resources

The Modified Route D Alternative route is described in Section E.4.1. It includes three main segments: a southwesterly segment that crosses BLM, CNF and private lands before reaching the Cameron Substation, a westerly segment that follows the southern boundary of the CNF, and a northerly segment that is primarily on CNF land and includes the Modified Route D Substation.

E.4.2.1 Environmental Setting

The Modified Route D Alternative is located in the Colorado Desert and South Coast bioregions. This 39 miles alternative would only be used in combination with the Interstate 8 Alternative, diverging south at MP I8-47.3 (MP MD-0.0). The predominant vegetation community is chaparral. Other vegetation communities in this alternative include sage scrub, grasslands, oak riparian forest, oak woodlands, and riparian forest. Jurisdictional habitats include oak riparian forest and riparian forest. Vegetation communities are described in Section D.2.5. Detailed vegetation mapping for ~~the~~ this alternative can be found in Appendix 8J. A generalized vegetation map for all of the SWPL Alternatives is presented in Figure E.1.2-1.

Since a formal delineation has not yet been conducted, the precise presence and extent of waters and wetlands at this time is unknown. However, the following vegetation communities identified during vegetation mapping for this alternative are often jurisdictional: non-vegetated channel, southern cottonwood-willow riparian forest, southern riparian forest, and southern coast live oak riparian woodland.

Overview of Special Habitat Management Areas. The majority of the Modified Route D Alternative is located on BLM and USDA Forest Service lands. The Modified Route D Alternative would occur within 1.0 mile of adjacent to the La Posta Indian Reservation, Campo Indian Reservation, Inventoried Roadless Areas, Hauser Mountain Wilderness area, Existing Hauser Wilderness, Recommended Hauser Wilderness, and Existing Pine Creek Wilderness.

Designated Critical Habitat. No designated critical habitat for any plant or animal species occurs along this alternative.

Special Status Plant Species. Table E.1.2-1 contains the status information and habitat requirements for special status plant species.

One listed species was assumed to be present where the Modified Route D Alternative would cross USDA Forest Service modeled habitat (USDA, 2007): San Diego thorn-mint.

One non-listed sensitive plant was observed along the Modified Route D Alternative in 2007: sticky geraea.

The following five federal and/or State listed as rare, threatened, or endangered plant species have a moderate to high potential to occur within the vicinity of the Modified Route D Alternative. Although the Spring 2007 rare plant surveys for this species were negative, the species may occur within the alignment due to the fact that the surveys were conducted during a year of very low rainfall.

- Orcutt's brodiaea
- Dunn's mariposa lily
- Dehesa nolina
- San Bernardino bluegrass
- Gander's ragwort

The following 28 non-listed, sensitive plant species have a moderate to high potential to occur within the vicinity of the Modified Route D Alternative:

- Peninsular manzanita
- Dean's milk-vetch
- Jacumba milk-vetch
- San Diego milk-vetch
- Payson's jewel-flower
- Long-spined spineflower
- Delicate clarkia
- Tecate tarplant
- Palmer's goldenbush
- Vanishing wild buckwheat
- Mission Canyon bluecup
- San Diego gumplant
- Ramona horkelia
- San Diego sunflower
- Robinson's pepper-grass
- Felt-leaved monardella
- Hall's monardella
- Baja navarretia
- Chaparral nolina
- Moreno currant
- San Miguel savory
- Southern skullcap
- Hammitt's clay-cress
- Laguna Mountains jewel-flower
- Southern jewel-flower
- San Bernardino aster
- Parry's tetracoccus

Special Status Animal Species. Table E.1.2-2 contains the status information and habitat requirements for special status wildlife species.

One listed wildlife species, least Bell's vireo, was observed along the Modified Route D Alternative. One listed wildlife species, arroyo toad, was not observed, but was assumed to be present because dry weather conditions prevented surveys from being conducted.

- Arroyo toad (assumed presence)
- Least Bell's vireo

The following eight non-listed sensitive wildlife species were observed along the Modified Route D Alternative in 2007:

- Hermes copper butterfly
- Coast (San Diego) horned lizard
- Bell's sage sparrow
- Cooper's hawk
- Golden eagle
- Rufous-crowned sparrow
- Yellow warbler
- White-tailed kite
- San Diego black-tailed jackrabbit

The following four federal and/or State listed as rare, threatened, or endangered wildlife species, or highly sensitive wildlife species, have a moderate to high potential to occur within the vicinity of the Modified Route D Alternative:

- Quino checkerspot butterfly
- Swainson’s hawk
- Southwestern willow flycatcher
- Bald eagle (wintering)

The following 45 non-listed sensitive wildlife species have a moderate to high potential to occur along the Modified Route D Alternative:

- | | |
|---|--|
| <ul style="list-style-type: none"> • Coast Range newt • Western spadefoot • Large-blotched salamander • Coast patch-nosed snake • Coastal rosy boa • Coronado skink • Red-diamond rattlesnake • Belding’s orange-throated whiptail lizard • San Diego mountain kingsnake • San Diego ringneck snake • Silvery legless lizard • Southwestern pond turtle • Two-striped garter snake • California horned lark • Coastal cactus wren • Ferruginous hawk (wintering) • Grasshopper sparrow • Gray vireo • Least bittern • Loggerhead shrike • Long-eared owl • Northern harrier | <ul style="list-style-type: none"> • Prairie falcon • Purple martin • Sharp-shinned hawk (wintering) • Yellow-breasted chat • White-faced ibis • American badger • Dulzura pocket mouse • Fringed myotis • Long-eared myotis • Long-legged myotis • Jacumba little pocket mouse • Northwestern San Diego pocket mouse • Pallid bat • Pallid San Diego pocket mouse • Pocketed free-tailed bat • Ringtail • San Diego desert woodrat • Small-footed myotis • Southern grasshopper mouse • Townsend's big-eared bat • Western mastiff bat • Western red bat • Yuma myotis |
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E.4.2.2 Environmental Impacts and Mitigation Measures

Table E.4.2-1 summarizes the impacts of the Modified Route D Alternative for biology.

Impact No.	Description	Impact Significance
Modified Route D Alternative (including Modified Route D Substation) and Star Valley Option		
B-1	Construction activities would result in temporary and permanent losses of native vegetation	Class I, II, and III
B-2	Construction activities would result in adverse effects to jurisdictional waters and wetlands through vegetation removal, placement of fill, erosion, sedimentation, and degradation of water quality	Class II
B-3	Construction and operation/maintenance activities would result in the introduction of invasive, non-native, or noxious plant species	Class II
B-4	Construction activities would create dust that may result in degradation of vegetation	Class III
B-5	Construction activities would result in direct or indirect loss of listed or sensitive plants or a direct loss of habitat for listed or sensitive plants	Class I

Table E.4.2-1. Impacts Identified – Alternatives – Biology

Impact No.	Description	Impact Significance
B-6	Construction activities, including the use of access roads, would result in disturbance to wildlife and result in wildlife mortality	Class III
B-7	Direct or indirect loss of listed or sensitive wildlife or a direct loss of habitat for listed or sensitive wildlife (includes impacts B-7D through B-7M for individual wildlife resources)	Class I, II, No Impact
B-8	Construction activities would result in a potential loss of nesting birds (violation of the Migratory Bird Treaty Act)	Class II
B-9	Construction or operational activities would adversely affect linkages or wildlife movement corridors, the movement of fish, and/or native wildlife nursery sites	Class II, No Impact
B-10	Presence of transmission lines may result in electrocution of, and/or collisions by, listed or sensitive bird species	No impact (electrocution) I, II (collision)
B-11	Presence of transmission lines may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers	Class III
B-12	Maintenance activities would result in disturbance to wildlife and could result in wildlife mortality	Class II, III
Star Valley Option		
B-1	Construction activities would result in temporary and permanent losses of native vegetation	Class I, <u>II</u> , III, No Impact
B-2	Construction activities would result in adverse effects to jurisdictional waters and wetlands through vegetation removal, placement of fill, erosion, sedimentation, and degradation of water quality	Class II
B-3	Construction and operation/maintenance activities would result in the introduction of invasive, non-native, or noxious plant species	Class II
B-4	Construction activities would create dust that may result in degradation of vegetation	Class III
B-5	Construction activities would result in direct or indirect loss of listed or sensitive plants or a direct loss of habitat for listed or sensitive plants	Class I
B-6	Construction activities, including the use of access roads, would result in disturbance to wildlife and result in wildlife mortality	Class III
B-7	Direct or indirect loss of listed or sensitive wildlife or a direct loss of habitat for listed or sensitive wildlife (includes impacts B-7D through B-7K for individual wildlife resources)	Class I, II, No Impact
B-8	Construction activities would result in a potential loss of nesting birds (violation of the Migratory Bird Treaty Act)	Class II
B-9	Construction or operational activities would adversely affect linkages or wildlife movement corridors, the movement of fish, and/or native wildlife nursery sites	Class II, No Impact
B-10	Presence of transmission lines may result in electrocution of, and/or collisions by, listed or sensitive bird species	No impact (electrocution) I, II (collision)
B-11	Presence of transmission lines may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers	Class III
B-12	Maintenance activities would result in disturbance to wildlife and could result in wildlife mortality	Class II, III

This section presents a discussion of impacts and mitigation measures for the Modified Route D Alternative, including the Modified Route D substation, as a result of construction, operation, and maintenance of the project.

Several general impacts to biological resources would occur with this alternative, and impact significance would be the same as for the Proposed Project. For these impacts, the mitigation measures presented for the Proposed Project would also be required for this alternative. Discussion of each of these impacts is presented in the Proposed Project impact analysis in Sections D.2.5 to D.2.16.

- Impact B-3: Construction activities would result in the introduction of invasive, non-native, or noxious plant species (Class II), Mitigation Measure B-1a (Provide restoration/compensation for affected sensitive vegetation communities), Mitigation Measure B-2a (Provide restoration/compensation for affected jurisdictional areas), and Mitigation Measure B-3a (Prepare and implement a Weed Control Plan).
- Impact B-4: Construction activities would create dust that may result in degradation of vegetation (Class III).
- Impact B-6: Construction activities, including the use of access roads, would result in disturbance to wildlife and result in wildlife mortality (Class III).
- Impact B-8: Construction activities would result in a potential loss of nesting birds (violation of the Migratory Bird Treaty Act; Class II), Mitigation Measure B-8a (Conduct pre-construction surveys and monitoring for breeding birds)

Impacts and the required mitigation measures that differ from the Proposed Project are addressed below.

Impact B-1: Construction activities would result in temporary and permanent losses of native vegetation (Class I for sensitive vegetation, vegetation management, type conversion, and RCAs; Class III for non-sensitive vegetation)

Construction of the Modified Route D Alternative would cause both temporary (during construction from vegetation clearing) and permanent (displacement of vegetation with project features such as towers and permanent access roads) impacts to vegetation communities (see Table E.4.2-2). These impacts and the corresponding mitigation requirements listed in Table E.4.2-2 are based on preliminary project design and would likely be revised during final project design. Construction activities would also result in the alteration of soil conditions, including the loss of native seed banks and changes in topography and drainage, such that the ability of a site to support native vegetation after construction is impaired.

The following APMs, as set forth in Table D.2-5, would be implemented to avoid or minimize impacts to vegetation communities: BIO-APM-1 and 2, BIO-APM-4 through BIO-APM-6, BIO-APM-16, BIO-APM-17, BIO-APM-20, BIO-APM-23, and BIO-APM-25. These APMs include avoiding or compensating impacts to sensitive vegetation communities, personnel training, restricting work to within predetermined limits of construction, limiting construction of access roads, minimizing impacts by mowing vegetation or leaving it in place instead of clearing it (where possible), conserving and reusing sensitive habitat topsoil, and revegetating with appropriate seed mixes.

Even with implementation of the APMs, however, the impacts to sensitive vegetation communities would be significant according to Significance Criterion 2.a (substantial adverse effect on a riparian habitat or other sensitive natural community by temporarily or permanently removing it during construction, grading, clearing, or other activities). The impacts would be significant because the APMs are not specific enough or do not provide enough mitigation to adequately compensate for the impacts. The measures in the APMs shall still apply except where the mitigation measures are more specific or more restrictive than the APM requirements. In those instances, the mitigation measures take precedence. Impacts to sensitive vegetation communities are not mitigable to less than significant levels (Class I) because adequate mitigation land may not be available to compensate for the impacts. Impacts to non-native vegetation, developed areas, and disturbed habitat would be adverse but less than significant (Class III), and no mitigation is required. Implementation of Mitigation Measures B-1a and B-1c (full

text of these mitigation measures is provided in Appendix 12) are required to, at least in part, compensate for impacts to sensitive vegetation communities.

Mitigation Measure B-1a includes mitigation ratios required by the various resource agencies, provides more specific information on the required habitat restoration plans, includes the BLM, CPUC, and USDA Forest Service as approving agencies, requires preparation of a habitat management plan, and requires a Property Analysis Record that will identify funding requirements for management of mitigation sites in perpetuity. Mitigation Measure B-1c requires biological monitoring.

Riparian Conservation Areas (RCAs). ~~Impacts to RCAs are not allowed on NFS lands, in accordance with the Forest Plan (USDA, 2005). The five-step screening process, as described in Section E.1.2.1, was used to identify RCAs along the Modified Route D Alternative. The RCA analysis, including the five-step screening process, is provided in Appendix 8Q.~~ The Modified Route D Alternative would impact RCAs through the construction of access roads, pull sites, and towers. ~~Table E.4-1 presents the impacts to RCAs, mitigation ratios, and mitigation acreages for the Modified Route D Alternative.~~ BIO-APM-2, BIO-APM-4 through 6, BIO-APM-16 through 18, BIO-APM-20, and BIO-APM-23 would be applied to minimize or avoid significant impacts to RCAs. Even with implementation of the APMs, however, the impacts would be considered significant and not mitigable (Class I) according to Significance Criteria 2 (substantial adverse effect on a riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the Wildlife Agencies) and 3.b. (failure to provide a wetland buffer adequate to protect the function and values of existing wetlands) if the final project could not be designed to avoid RCAs. Implementation of Mitigation Measures B-1a and B-1c are required to, at least in part, compensate for impacts to RCAs.

Table E.4.2-2. Impacts to Vegetation Communities and Required Mitigation – Modified Route D Alternative

Vegetation Communities	Permanent Impacts			Temporary Impacts				Total Offsite Mitigation
	Impact	Ratio	Offsite Mitigation	Impact	Ratio	Onsite Restoration	Offsite Mitigation	
Non-Native Vegetation, Developed Areas, and Disturbed Habitat								
Developed	4.14	0	0.00	0.03	0	0.00	0.00	0.00
Disturbed habitat	20.46	0	0.00	9.26	0	0.00	0.00	0.00
Extensive agriculture	2.14	0	0.00	165.65	0	0.00	0.00	0.00
Subtotal	26.74	--	0.00	174.94	--	0.00	0.00	0.00
Coastal and Montane Scrub Habitats								
Big sagebrush scrub	1.22	1.5:1	1.83	32.72	1:1	32.72	0.00	1.83
Big sagebrush scrub (disturbed)	0.00	1.5:1	0.00	1.39	1:1	1.39	0.00	0.00
Coastal sage scrub – inland form	2.86	1.5:1	4.29	7.86	1:1	7.86	0.00	4.29
Coastal sage scrub – inland form (disturbed)	0.00	1.5:1	0.00	30.93	1:1	30.93	0.00	0.00
Coastal sage-chaparral scrub	0.00	1.5:1	0.00	0.00	1:1	0.00	0.00	0.00
Diegan coastal sage scrub	15.61	1.5:1	23.42	0.00	1:1	0.00	0.00	23.42
Diegan coastal sage scrub (disturbed)	0.00	1.5:1	0.00	0.00	1:1	0.00	0.00	0.00

Table E.4.2-2. Impacts to Vegetation Communities and Required Mitigation – Modified Route D Alternative

Vegetation Communities	Permanent Impacts			Temporary Impacts				Total Offsite Mitigation
	Impact	Ratio	Offsite Mitigation	Impact	Ratio	Onsite Restoration	Offsite Mitigation	
Flat-topped buckwheat scrub	0.29	1.5:1	0.44	0.24	1:1	0.24	0.00	0.44
Subtotal	19.98	--	29.98	73.14	--	73.14	0.00	29.98
Grasslands and Meadows								
Non-native grassland	8.26	1:1	8.26	228.87	1:1	228.87	0.00	8.26
Subtotal	8.26	--	8.26	228.87	--	228.87	0.00	8.26
Chaparrals								
Chamise chaparral	58.87	1:1	58.87	74.28	1:1	74.28	0.00	58.87
Chamise chaparral (burned)	0.46	1:1	0.46	0.89	1:1	0.89	0.00	0.46
Chamise chaparral (disturbed)	0.13	1:1	0.13	0.05	1:1	0.05	0.00	0.13
Northern mixed chaparral	124.37	1:1	124.37	66.45	1:1	66.45	0.00	124.37
Northern mixed chaparral (disturbed)	2.03	1:1	2.03	13.47	1:1	13.47	0.00	2.03
Scrub oak chaparral	4.94	1:1	4.94	27.86	1:1	27.86	0.00	4.94
Southern mixed chaparral	19.04	1:1	19.04	23.88	1:1	23.88	0.00	19.04
Red shank chaparral	0.43	1:1	0.43	0.04	1:1	0.04	0.00	0.43
Subtotal	210.27	--	210.27	206.92	--	206.92	0.00	210.27
Woodlands and Forests								
Coast live oak woodland	2.68	3:1	8.04	14.82	3:1	14.82	29.64	37.68
Subtotal	2.68	--	8.04	14.82	--	14.82	29.64	37.68
Herbaceous Wetlands, Freshwater, and Streams								
Non-vegetated channel	0.00	1:1	0.00	2.33	1:1	2.33	0.00	0.00
Subtotal	0.00	--	0.00	2.33	--	2.33	0.00	0.00
Riparian Forests and Woodlands								
Southern coast live oak riparian forest	0.12	3:1	0.36	0.19	2:1	0.19	0.19	0.55
Southern cottonwood-willow riparian forest	0.00	3:1	0.00	0.00	2:1	0.00	0.00	0.00
Southern riparian forest	0.06	3:1	0.18	0.00	2:1	0.00	0.00	0.18
Subtotal	0.18	--	0.54	0.19	--	0.19	0.19	0.73
GRAND TOTAL	268.11	--	257.09	701.21	--	526.27	29.83	286.92

Vegetation Management (Loss of Trees). ~~SDG&E has estimated based on preliminary project design that up to approximately 114 native oak trees would be removed to maintain proper clearance between vegetation and the transmission lines along the entire length of this alternative. With final project design, these estimates will likely be reduced. SDG&E made no estimates as to how many trees or shrubs would be removed or trimmed as part of vegetation management for this alternative. However, there are native woodland and forest communities present along the route (see Table E.4.2-2) that support trees that would likely require either removal or trimming.~~ The loss of a native tree or shrub that contains an active bird nest would be a violation of the Migratory Bird Treaty Act and a significant impact, but one that is mitigable to less than significant levels (Class II). See discussion in Impact B-8 (Construction activities would result in a potential loss of nesting birds [violation of the Migratory Bird Treaty Act]) for how construction activities (including tree/shrub removal) would result in a potential

loss of nesting birds and violation of the Migratory Bird Treaty Act. The loss of native trees and shrubs would be a significant impact (Class I) for these reasons:

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

SDG&E has estimated based on preliminary project design that this alternative would require trimming of up to approximately 38 native trees (28 oak trees and 10 willow trees). With final project design, these estimates will likely be reduced. The trimming of a native tree or shrub that contains an active bird nest would be a violation of the Migratory Bird Treaty Act and a significant impact that is mitigable to less than significant levels (Class II). See discussion in Impact B-8 for how construction activities (including tree trimming) would result in a potential loss of nesting birds and violation of the Migratory Bird Treaty Act.

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

Type Conversion. As discussed in Section D.15, the construction and operation of new transmission lines in areas with high fire risk could cause wildfires, and could reduce the effectiveness of fire fighting efforts. Fires cause direct loss of vegetation communities, wildlife habitat, and wildlife species. Although periodic fires are part of the natural ecosystem, fires burning too frequently can have significant long-term ecological effects such as degradation of habitat (temporal loss of habitat and non-native plant species invasion) and loss of special status species. The biodiversity of most of San Diego County is uniquely adapted to low rainfall, rugged topography, and wildfires. However, fires have become more frequent with growth in the human population, creating a situation in which vegetation communities (and, therefore, habitats for plant and animal species) are changed dramatically and may not recover.

This change in vegetation community is called "type conversion" and can occur to any native vegetation community. Type conversion occurs when multiple disturbances allow the colonization of non-native plant species into a landscape previously dominated by native vegetation. When multiple disturbances, such as wildfires, occur at an intensity and frequency outside of the natural range of variability of a native ecosystem, these conditions tend to suppress regrowth of native vegetation and favor long-term dominance of non-native, early-successional plants. Because chaparral is typically dominated by non-sprouting obligate seeding species and requires a minimum time to develop an adequate seed bank

for regeneration, this sensitive vegetation type is vulnerable to fires at intervals of less than 10 years. When burned too frequently, vegetation communities are often taken over by highly flammable, weedy, non-native plant species that burn even more often and provide minimal habitat value for native plant and animal species, especially those of special status. For example, the coastal California gnatcatcher is dependent primarily on coastal sage scrub vegetation which, if burned too many times, can convert to non-native grassland or disturbed habitat that would preclude its use by the gnatcatcher. If the project were to cause a fire, or inhibit fighting of fires, and this leads to type conversion of sensitive vegetation communities, the impact would be significant according to Significance Criterion 1 (substantial adverse effect through habitat modification on any species identified as candidate, sensitive, or special status) and/or Significance Criterion 2 (substantial adverse effect on a riparian habitat or other sensitive natural community). Extensive mitigation for fire risk is presented in Section D.15. However, not all fires can be prevented. Although future fires may not cause type conversion in all instances, the impact must be considered significant because of the severity of potential habitat loss. This impact is not mitigable to less than significant levels (Class I). Implementation of the vegetation management program (described above) would reduce the fire risk of the project, although not to a less than significant level. In addition, Mitigation Measure B-1k (Re-seed disturbed areas after a transmission line caused fire) would reduce the likelihood of type conversion from a project-caused fire, though not to a less than significant level.

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

- B-1a** Provide restoration/compensation for affected sensitive vegetation communities. Mitigation ratios and mitigation acreages for the Modified Route D Alternative are provided in Table E.4.2-2.
- B-1c** Conduct biological monitoring.
- B-1k** Re-seed disturbed areas after a transmission line caused fire.

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

Direct and/or indirect impacts to jurisdictional waters and possibly wetlands (i.e., areas regulated by the ACOE and Regional Water Quality Control Board RWQCB and/or CDFG) could occur from construction of the Modified Route D Alternative. Impacts to jurisdictional areas can not be clearly defined until a final route is selected that includes project-specific features and final engineering. At that time, a formal delineation would be conducted to determine those impacts so that SDG&E can apply for permits from the ACOE, Regional Water Quality Control Board (RWQCB), and CDFG. Since a formal delineation has not yet been conducted, the precise presence and extent of waters and wetlands at this time is unknown. However, the following vegetation communities identified during vegetation mapping for this alternative are often jurisdictional: non-vegetated channel, southern cottonwood-willow riparian forest, southern riparian forest, and southern coast live oak riparian woodland.

The following APMs, as set forth in Table D.2-5, would be implemented to minimize or prevent significant impacts to jurisdictional waters and wetlands: BIO-APM-1 and BIO-APM-2, BIO-APM-4, BIO-APM-5, BIO-APM-16, and BIO-APM-18. These APMs include avoiding or compensating impacts to jurisdictional waters and wetlands, personnel training, restricting work to within predetermined limits of construction, limiting construction of access roads, avoiding clear-cut tree removals in riparian areas

if possible, building streambed crossings at right angles to streambeds, and restricting the length of access roads that parallel streambeds.

Even with implementation of the APMs, this alternative could have a significant impact on regulated jurisdictional areas according to Significance Criterion 3.a. (substantial adverse effect on water quality or wetlands as defined by the ACOE and/or CDFG). The impacts would be significant because the APMs are not specific enough or do not provide enough mitigation to adequately compensate for the impacts. The measures in the APMs shall still apply except where the mitigation measures are more specific or more restrictive than the APM requirements. In those instances, the mitigation measures take precedence. These impacts would be considered significant but mitigable to less than significant levels (Class II) with implementation of Mitigation Measures B-1c and B-2a (full text of these mitigation measures is provided in Appendix 12).

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

B-1c Conduct biological monitoring.

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

Impact B-5: Construction activities would result in direct or indirect loss of listed or sensitive plants or a direct loss of habitat for listed or sensitive plants (Class I)

Listed or sensitive (special status) plant species impacts would result from direct loss of known locations of individuals, or direct loss of potential habitat as a result of temporary or permanent grading or vegetation clearing during construction. Focused plant species surveys were conducted in spring/summer of 2007 only where ROE permission was granted.

One special status plant species was observed along the Modified Route D Alternative during 2007: sticky geranium (Appendix 8J-27). One listed species is assumed to be present based on USDA Forest Service modeled habitat (USDA, 2007): San Diego thorn-mint. However, as with the Proposed Project, the results of the surveys are inconclusive because the poor rainfall conditions may have prevented special status plants from germinating or resprouting so they could not be observed.

The following 32 special status plant species have moderate to high potential to occur along the alternative based on the habitats present and/or documented CNDDDB, USFWS, and USDA Forest Service records: Peninsular manzanita, Dean's milk-vetch, Jacumba milk-vetch, San Diego milk vetch, Orcutt's brodiaea, Dunn's mariposa lily, Payson's jewel-flower, long-spined spineflower, delicate clarkia, Tecate tarplant, Palmer's goldenbush, vanishing wild buckwheat, Mission Canyon bluecup, San Diego gumplant, Ramona horkelia, San Diego sunflower, Robinson's peppergrass, felt-leaved monardella, Hall's monardella, Baja navarretia, chaparral nolina, Dehesa nolina, San Bernardino bluegrass, Moreno currant, San Miguel savory, southern skullcap, Gander's ragwort, Hammitt's clay-cress, Laguna Mountains jewel-flower, southern jewel-flower, San Bernardino aster, and Parry's tetracoccus. Five of these are federal and/or State listed: Orcutt's brodiaea (SR), Dunn's mariposa lily (SR), Dehesa nolina (SE), San Bernardino bluegrass (FE), and Gander's ragwort (SR). For more specific information about the special status plant species and their listing or sensitivity status, see Table E.1.2-1.

The following APMs, as set forth in Table D.2-5, would be implemented for this alternative to minimize or avoid significant impacts to listed or sensitive plant species or their habitats: BIO-APM-1 through 6, BIO-APM-8, BIO-APM-13, BIO-APM-18, and BIO-APM-22. These APMs include detailed

surveys, avoidance or relocation/restoration or compensation (acquisition and preservation of land), personnel training, restricting work to within predetermined limits of construction, limiting construction of access roads, complying with wildlife/habitat protection regulations, clearly delineating plant population boundaries, notifying the Wildlife Agencies when such plants are to be removed in the work area, prohibiting the collection of plants, designing structures and access roads to avoid or minimize impacts, and salvaging plants where avoidance is not feasible.

Even with implementation of the APMs, the Modified Route D Alternative would impact the following special status plant species:

Sticky geraea. Sticky geraea occurs between MPs MRD-7.7 and MRD-8.2 (Appendix 8J, Figure 8J-33). Approximately 4 individuals were observed near MRD-7.7 and 1 individual was observed near MRD-8.2. The Modified Route D Alternative would not affect these individuals as they are located outside of the Modified Route D ROW. However, surveys for this species and other plant species were not conducted along the entire length of this alternative because its alignment shifted after the rare plant survey period. It is likely that the species is present in the ROW and would be affected by this alternative through habitat removal for access roads and project features.

San Diego Thorn-mint. USDA Forest Service modeled habitat (USDA, 2007) for San Diego thorn-mint occurs between MPs MRD-13.7 and 16.1 (Appendix 8J, Figure Ap. 8J-34). It is assumed that the species is present throughout the modeled habitat due to inconclusive surveys in 2007. The Modified Route D Alternative would affect this species through construction of 12 towers: Tower MD2127 and Towers USFS1091 through USFS1101 (Appendix 8J, Figure Ap. 8J-34). Five pulling sites and numerous access roads associated with these towers would also affect this species.

Even with implementation of the APMs, the impacts would be significant according to Significance Criterion 1.a. (impact to one or more individuals of a species that is federal or State listed as endangered or threatened) and Significance Criterion 1.b. (impact that would affect the number or range or regional long-term survival of a sensitive or special status plant species).

With the exceptionally dry weather conditions in 2007, the assumption is made that special status plant species are present and impacted by this alternative. Since it is not possible to adequately assess the amount of impact to the special status plant species, the impacts are considered significant and not mitigable to less than significant levels (Class I). Implementation of Mitigation Measures B-1a, B-1c, B-2a, and B-5a is required to, at least in part, compensate for impacts to special status plant species.

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

- B-1a** Provide restoration/compensation for affected sensitive vegetation communities.
- B-1c** Conduct biological monitoring.
- B-2a** Provide restoration/compensation for affected jurisdictional areas.
- B-5a** Conduct rare plant surveys and implement appropriate avoidance/minimization/mitigation strategies.

Impact B-7: Direct or indirect loss of listed or sensitive wildlife or a direct loss of habitat for listed or sensitive wildlife (Class I for construction impacts to sensitive species; Other impact classes depend on species; see individual discussions)

The Modified Route D Alternative would impact the following listed or highly sensitive wildlife species: least Bell's vireo (Impact B-7D), golden eagle (Impact B-7H), QCB (Impact B-7J), and arroyo toad (Impact B-7K), ~~and~~. This alternative could also impact southwestern willow flycatcher (Impact B-7E), bald eagle (Impact B-7I), and coastal California gnatcatcher (Impact B-7M). Impacts to these species are discussed in detail below. Impacts to the listed Swainson's hawk are discussed in Impact B-10.

The following listed or highly sensitive species that are addressed for the Proposed Project are not addressed for the Modified Route D Alternative because they either do not occur, or have low potential to occur, in the alternative study area: FTHL (Impact B-7A), PBS (Impact B-7B), desert pupfish (Impact B-7F), desert tortoise (Impact B-7G), Stephens' kangaroo rat (Impact B-7L), San Diego and/or Riverside fairy shrimp (Impact B-7N), and barefoot banded gecko (Impact B-7O).

The Modified Route D Alternative would impact the following non-listed, sensitive wildlife species and their habitats: Hermes copper butterfly, Coast (San Diego) horned lizard, Bell's sage sparrow, Cooper's hawk, rufous-crowned sparrow, white-tailed kite, and yellow warbler (Appendix 8J). This alternative also has the potential to impact the 46 non-listed, sensitive wildlife species with moderate to high potential to occur (listed at the beginning of E.4.1 [Special Status Wildlife Species]) should they be present.

Hermes copper butterfly. Four Hermes copper butterflies were observed in three locations along the Modified Route D Alternative: MPs MRD-23.8, MRD-24.3, and MRD-24.8 (Appendix 8J, Figure Ap. 8J-36). The Hermes copper butterfly would be impacted by the removal of vegetation and habitat modification due to construction of access roads, pull sites, and approximately 7 towers (Towers MD2101 through MD2103 and Towers USFS1055 through USFS1058). Individuals of the species could also be killed if they are within the construction zone and are crushed by equipment.

Coast (San Diego) horned lizard. Three San Diego horned lizards were observed along the Modified Route D Alternative near MPs MRD-35.7, MRD-35.9, and near the Modified Route D Substation (Appendix 8J, Figures Ap. 8J-38 and Ap. 8J-39). The horned lizard would be affected by the removal of vegetation and habitat modification, and individuals of the species could also be killed if they are within the construction zone and are crushed by equipment.

Bell's sage sparrow. Two Bell's sage sparrows were observed along the Modified Route D Alternative at MPs MRD-35.0 and at MRD-35.7 (Appendix 8J, Figures Ap. 8J-38 and Ap. 8J-39). This species would be affected through removal of vegetation and habitat modification. Construction would also cause indirect noise impacts to the species if construction were to occur in or adjacent to habitat during the general avian breeding season (see Impact B-8).

Cooper's hawk. The Cooper's hawk was observed in one location along the Modified Route D Alternative at MPs MRD-11.5 (Appendix 8J, Figure Ap. 8J-34). This species could possibly breed along this alternative (Unitt, 2004) and the species would be affected through removal of vegetation and habitat modification. Construction would cause indirect noise impacts to breeding Cooper's hawks if construction were to occur in or adjacent to its breeding habitat (riparian and oak woodlands) during the general avian breeding season (see Impact B-8).

Rufous-crowned sparrow. One rufous-crowned sparrow was observed along the Modified Route D Alternative at MPs MRD-35.4 (Appendix 8J, Figures Ap. 8J-38 and Ap. 8J-39). This species would be affected through removal of vegetation and habitat modification. Construction would also cause indirect noise impacts to the species if construction were to occur in or adjacent to habitat during the general avian breeding season (see Impact B-8).

White-tailed kite. White-tailed kite was observed in one location along the Modified Route D Alternative: near the staging area along Cameron Truck Trail, immediately south of Interstate 8 (Appendix 8J, Figure Ap. 8J-33). This species could possibly breed along this alternative (Unitt, 2004) and the species would be affected through removal of vegetation and habitat modification. Construction would cause indirect noise impacts to breeding Cooper's hawks if construction were to occur in or adjacent to its breeding habitat (riparian and oak woodlands) during the general avian breeding season (see Impact B-8).

Yellow warbler. The yellow warbler was observed in two locations along Modified Route D Alternative at MPs MRD-11.5 and MRD-34.8 (Appendix 8J, Figures Ap. 8J-34 and Ap. 8J-38). This species is expected to breed along this alternative and would be affected through removal of vegetation and habitat modification. Construction would also cause indirect noise impacts that would impact yellow warbler breeding if construction were to occur in or adjacent to the warbler's habitat (riparian and oak woodlands/forests) during the general avian breeding season (see Impact B-8). The following APMs, as set forth in Table D.2-5, would be implemented to minimize or prevent direct or indirect loss of listed or sensitive wildlife or a direct loss of habitat for listed or sensitive wildlife: BIO-APM-2 through 4, BIO-APM-7, BIO-APM-14, BIO-APM-16, BIO-APM-24, BIO-APM-26, BIO-APM-27, and BIO-APM-29. These APMs include personnel training, restricting work to within predetermined limits of construction, prohibiting litter, identifying environmentally sensitive tree trimming locations, inspecting trenches/excavations twice daily and removing of trapped animals, covering construction holes/trenches overnight and inspecting them for wildlife prior to filling, sloping excavations to provide a wildlife escape route, removing raptor nests when inactive, reducing construction night lighting, and keeping vehicle traffic to minimum volume and speed.

Even with implementation of the APMs, the Modified Route D Alternative would have a substantial adverse effect on listed and sensitive wildlife species and their habitats according to Significance Criterion 1 (substantial adverse effect, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the Wildlife Agencies).

Most of the non-listed special status species' habitats are sensitive vegetation communities (Table E.4.2-2); the mitigation for the loss of the sensitive vegetation communities (Mitigation Measure B-1a) would normally compensate for the potential loss of these sensitive species and their habitats. However, since adequate land required by Mitigation Measure B-1a may not be available, the impacts to non-listed sensitive wildlife species are considered significant and not mitigable to less than significant levels (Class I). Implementation of Mitigation Measures B-1a, B-1c, B-2a, and B-7a (full text of these mitigation measures is provided in Appendix 12) is required to compensate, at least in part, for impacts to non-listed, sensitive wildlife species and their habitats.

Mitigation Measures for Impact B-7: Direct or indirect loss of listed or sensitive wildlife or a direct loss of habitat for listed or sensitive wildlife

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

B-1c Conduct biological monitoring.

- B-2a** Provide restoration/compensation for affected jurisdictional areas.
- B-7a** Ensure that all steep-walled trenches or excavations used during construction shall be covered to prevent the entrapment of wildlife (e.g., reptiles and small mammals).

Impact B-7D: Direct or indirect loss of least Bell's vireo or direct loss of habitat (Class II)

Focused surveys for the least Bell's vireo were conducted at MP MRD-11.5 (Hauser Creek), MRD-20.6 (Cottonwood Creek), and MRD-34.6 (Sweetwater River).

In 2007, the least Bell's vireo was detected at MRD-11.5 and at MRD-20.6. The vireo at MRD-20.6 is assumed to be a migrant because it was detected during one of the coastal California gnatcatcher surveys and was not detected during any of the vireo surveys or any other surveys completed near this survey site. However, the habitat near MRD-20.6 is suitable for the vireo and the species is assumed to occupy all of the riparian habitat along Cottonwood Creek. The 2007 survey results were negative at MRD-34.6.

Construction of the Modified Route D Alternative would result in permanent impacts to 0.3 acres of occupied least Bell's vireo habitat and temporary impacts to 0.2 acres of occupied vireo habitat. These impacts would be significant according to Significance Criterion 1.a (substantial adverse effect through any impact to one or more individuals of a federal or State listed species) and Significance Criterion 1.g (substantial adverse effect through activities that result in the killing of migratory birds or destruction or abandonment of migratory bird nests and/or eggs). Any direct impact to least Bell's vireo or its occupied habitat would be significant but mitigable to less than significant levels (Class II) with implementation of Mitigation Measures B-1a, B-1c, B-2a, and B-7e (full text of these mitigation measures is provided in Appendix 12). Mitigation Measure B-7e requires a pre-construction survey for the species be conducted if construction activities would occur during the least Bell's vireo breeding season. The pre-construction survey required in Mitigation Measure B-7e would conclusively define all the impacts to the least Bell's vireo from construction of this alternative. The mitigation in Mitigation Measure B-7e may need to be reduced based on the results of this survey (i.e., if the vireo is not found at MRD-20.6). It is expected that adequate mitigation land would be available to satisfy the mitigation required in Mitigation Measure B-7e because of the small number of acres needed and because this type of mitigation for the least Bell's vireo is typically available and regularly provided in San Diego County.

Additionally, least Bell's vireo breeding can be affected by excessive construction noise (considered by the USFWS [USFWS, 2007c; American Institute of Physics, 2005] to be 60 dB(A) Leq at the edge of occupied habitat). This impact would be significant according to Significance Criterion 4.d. (adversely affect wildlife through an increase in noise). Such excessive noise would be a significant impact on vireo breeding but is mitigable to less than significant levels (Class II) with implementation of Mitigation Measure B-7e, which requires monitoring for disturbance of nesting activities and taking action to stop the disturbance.

Mitigation Measures for Impact B-7D: Direct or indirect loss of least Bell's vireo or direct loss of habitat

- B-1a** Provide restoration/compensation for affected sensitive vegetation communities.
- B-1c** Conduct biological monitoring.
- B-2a** Provide restoration/compensation for affected jurisdictional areas.
- B-7e** Conduct least Bell's vireo and southwestern willow flycatcher surveys and implement appropriate avoidance/minimization/compensation strategies. For the Modified Route D

Alternative, the required mitigation for habitat occupied by least Bell's vireo includes 0.2 acres of on-site restoration and 1.3 acres of off-site acquisition and preservation of occupied least Bell's vireo habitat. All other least Bell's vireo mitigation described in Mitigation Measure B-7e for the Proposed Project (Section D.2.11) is also required for this alternative.

Impact B-7E: Direct or indirect loss of southwestern willow flycatcher or direct loss of habitat (Class II)

Focused surveys for the southwestern willow flycatcher were conducted at MP MRD-11.5 (Hauser Creek), MRD-20.6 (Cottonwood Creek), and MRD-34.6 (Sweetwater River).

The 2007 survey results were negative. Construction of the Modified Route D Alternative would result in impacts to riparian vegetation with the potential to support southwestern willow flycatcher. Southwestern willow flycatcher breeding can also be affected by excessive construction noise (considered to be 60 dB(A) Leq at the edge of occupied habitat by the USFWS [USFWS, 2007c; American Institute of Physics, 2005]).

Any impact to southwestern willow flycatcher breeding would be significant according to Significance Criterion 1.a (substantial adverse effect through any impact to one or more individuals of a federal or State listed species), Significance Criterion 1.g (substantial adverse effect through activities that result in the killing of migratory birds or destruction or abandonment of migratory bird nests and/or eggs) and Significance Criterion 4.d. (adversely affect wildlife through an increase in noise). Any impact to flycatcher breeding, including impacts due to excessive noise, would be significant but mitigable to less than significant levels (Class II) with implementation of Mitigation Measures B-1a, B-1c, B-2a, and B-7e.

Mitigation Measures for Impact B-7E: Direct or indirect loss of southwestern willow flycatcher or direct loss of habitat

- B-1a** Provide restoration/compensation for affected sensitive vegetation communities.
- B-1c** Conduct biological monitoring.
- B-2a** Provide restoration/compensation for affected jurisdictional areas.
- B-7e** Conduct least Bell's vireo and southwestern willow flycatcher surveys and implement appropriate avoidance/minimization/compensation strategies.

Impact B-7H: Direct or indirect loss of golden eagle or direct loss of habitat (Class I)

As noted in Section D.2.11, the golden eagle is very sensitive to human activity, especially in the vicinity of its nest site, and even distant construction activity (or maintenance activity; see Impact B-12) could cause abandonment of a nest, subsequent reproductive failure, and continuing decline of the species. These impacts would be significant according to Significance Criteria 1.e (substantial adverse effect on the breeding success of the golden eagle), 1.f (directly or indirectly cause the mortality of a special status species), 1.g (result in the abandonment of migratory bird nests and/or eggs), and 1.h (result in take of bald or golden eagles, eagle eggs or any part of an eagle). Human activity within 4,000 feet of a nest site is considered significant and not mitigable to less than significant levels (Class I), especially if there is direct line-of-sight between the nest site and the human activity, or if the human activity occurs above the nest site in elevation. An exception to this is if the activity within 4,000 feet of the nest site (without direct line-of-site and activity is below the nest site) occurs where there is already an existing disturbance such as a road or utility corridor.

Two golden eagle nest areas would be affected by the Modified Route D Alternative. The specific locations of these nest areas are not disclosed in this EIR/EIS (nor are the MPs within 4,000 feet of the nest areas) in order to protect the golden eagle. SDG&E will be made aware of the MPs subject to mitigation in an unpublished document. Nest locations, for purposes of this document, were provided by the Wildlife Research Institute (Bittner, 2007).

One of these nest areas occurs approximately 1,500 feet from the Modified Route D Alternative. There is direct line-of-site between this nest area and the project and construction would occur above the nest site in elevation. 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), the direct line-of-site that would occur, and because construction would occur above the nest. 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.

The second golden eagle pair that would be affected by the Modified Route D Alternative is located less than 4,000 feet from the Modified Route D Alternative. There is direct line-of-site between the nest area and the project. 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-site that would occur. Mitigation Measure B-7h is still required to minimize the impact.

A third golden eagle nest area occurs approximately 1.0 mile from the Modified Route D Alternative, but no impacts to this nest area are expected because construction would occur greater than 4,000 feet from the nest.

Impacts/mitigation relating to golden eagles and electrocution/collision with transmission towers/lines is discussed in Impact B-10 below.

Mitigation Measure for Impact B-7H: Direct or indirect loss of golden eagle or direct loss of habitat

B-7h **Implement appropriate avoidance/minimization strategies for eagle nests.**

Impact B-7I: Direct or indirect loss of bald eagle or direct loss of habitat (No Impact)

The Modified Route D Alternative would cross USDA Forest Service modeled habitat for bald eagle (USDA, 2007) at MP MRD-20.8 (Cottonwood Creek) and MRD-35.6 (Sweetwater River).

Bald eagle is seen occasionally in winter at Morena Reservoir, which is approximately 2 miles to the north, and Barrett Reservoir, which is approximately 1.5 miles to the north and to the east of this alternative (Appendix 8c). At its closest point (MRD-8.0), the Modified Route D Alternative is approximately 7,500 feet away from reported bald eagle sightings (USDA, 2007). There is a low potential that bald eagles would use the areas above for foraging during the winter.

The bald eagle is not known to and is not expected to nest within or adjacent to the Modified Route D Alternative (Bittner, 2007). The species is not known to nest at Morena Reservoir or Barrett Reservoir (Bittner, 2007). No impacts to bald eagle as a result of the Modified Route D Alternative are expected.

Impacts/mitigation relating to bald eagles and electrocution/collision with transmission towers/lines is discussed in Impact B-10 below.

Impact B-7J: Direct or indirect loss of quino checkerspot butterfly or direct loss of habitat (Class I)

Protocol surveys for the quino checkerspot butterfly (QCB) were not conducted in 2007 for the Modified Route D Alternative because the butterfly flight season was not preceded by adequate rainfall. As a result, no presence/absence data for this species is available for this alternative and a precise impact determination cannot be adequately made.

The closest QCB observation was made in 2004, approximately 1.25 miles east of the eastern end of the Modified Route D Alternative (USFWS, 2006). Four more QCB observations were made within 2 miles of the eastern end of the Modified Route D Alternative (USFWS, 2006). A historic QCB observation was made in 1972, approximately 1.25 miles east of the Modified Route D Alternative near Barrett Lake (USFWS, 2006). The Modified Route D Alternative would not cross QCB critical habitat.

The entire Modified Route D Alternative occurs within USFWS protocol Survey Area 2, an area where protocol surveys are required in suitable QCB habitat (USFWS, 2002a). Suitable QCB habitat includes shrub communities such as coastal sage scrub, chaparral, and desert scrub with 50 percent or less shrub cover and the potential to support dot-seed plantain (*Plantago erecta*) or other larval host plants.

While it is unlikely that the Modified Route D Alternative would impact very much (if any) QCB-occupied habitat within Survey Area 2, with the lack of definitive survey data, the Modified Route D Alternative would have a significant impact on this species according to Significance Criterion 1.a. (impact one or more individuals of a species that is federal or State listed as endangered or threatened). Implementation of Mitigation Measures B-1a, B-1c, B-2a, and B-7i is required to, at least in part, mitigate for impacts to the QCB butterfly and its habitat. Mitigation Measure B-7i requires a pre-construction survey for the species be conducted within any designated USFWS QCB survey area. Since adequate land required by Mitigation Measure B-7i may not be available, the impacts are considered significant and not mitigable to less than significant levels (Class I).

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

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

Impact B-7K: Direct or indirect loss of arroyo toad or direct loss of habitat (Class II)

Focused surveys in 2007 were conducted for the arroyo toad at MP MRD-20.6 (Cottonwood Creek) and MRD-34.6 (Sweetwater River). Results of the focused arroyo toad surveys were negative along the Modified Route D Alternative.

Suitable habitat was also present at MRD-14.4 (Potrero Creek). Arroyo toad surveys at this site were not conducted in 2007 because no surface water was present at the time of the habitat assessment. With a lack of surface water, arroyo toads may not emerge during the breeding season and a negative survey result would not be conclusive. Arroyo toads were documented along Potrero Creek in 1993, including where the Modified Route D Alternative would cross the creek (CDFG CNDDDB, 2007). Therefore,

arroyo toad is assumed to be present at MRD-14.4 and all habitat within 1 km is assumed to be occupied by the species, in accordance with USFWS (1999).

Impacts to the arroyo toad or its occupied breeding or burrowing habitat from habitat removal or disturbance from construction (e.g., crushing of toads with construction equipment) of the Modified Route D Alternative where the arroyo toad is assumed to be present include 19.0 acres of temporary impacts to upland burrowing habitat and 1.5 acres of permanent impacts to upland burrowing habitat. Impacts to arroyo toad would be significant according to Significance Criterion 1.a. (substantial adverse effect, either directly or indirectly, on one or more individuals of a federal or State listed species through habitat modification). These impacts would be significant but mitigable to less than significant levels (Class II) through implementation of Mitigation Measures B-1a, B-1c, B-2a, and B-7j. It is expected that adequate mitigation land would be available to satisfy the mitigation requirement because of the small number of acres needed and because this type of mitigation for the arroyo toad is typically available and regularly provided in San Diego County.

Mitigation Measures for Impact B-7K: Direct or indirect loss of arroyo toad or direct loss of habitat

- B-1a** Provide restoration/compensation for affected sensitive vegetation communities.
- B-1c** Conduct biological monitoring.
- B-2a** Provide restoration/compensation for affected jurisdictional areas.
- B-7j** Conduct arroyo toad surveys, and implement appropriate avoidance/minimization/compensation strategies. For the Modified Route D Alternative, the required mitigation for arroyo toad occupied habitat includes 19.0 acres of on-site restoration and 22.0 acres of off-site acquisition and preservation of occupied toad upland burrowing habitat. All other arroyo toad mitigation described in Mitigation Measure B-7j for the Proposed Project (Section D.2.11) is also required for this alternative.

Impact B-7M: Direct or indirect loss of coastal California gnatcatcher or direct loss of habitat (Class II)

Focused coastal California gnatcatcher surveys were conducted in 2007 between MP MRD-20.6 and MRD-20.7. Results of the focused gnatcatcher surveys were negative along the Modified Route D Alternative.

Construction of the Modified Route D Alternative would result in impacts to vegetation that has the potential to support coastal California gnatcatcher. These impacts would be significant according to Significance Criterion 1.a (substantial adverse effect through any impact to one or more individuals of a federal or State listed species) and Significance Criterion 1.g (substantial adverse effect through activities that result in the killing of migratory birds or destruction or abandonment of migratory bird nests and/or eggs). Any direct impact to coastal California gnatcatcher or its occupied habitat would be significant but mitigable to less than significant levels (Class II) with implementation of Mitigation Measures B-1a, B-1c, B-2a, and B-7l (full text of these mitigation measures is provided in Appendix 12).

Additionally, gnatcatcher breeding can be affected by excessive construction noise (considered to be 60 dB(A) Leq at the edge of occupied habitat by the USFWS [American Institute of Physics, 2005]). This impact would be significant according to Significance Criterion 4.d. (adversely affect wildlife through an increase in noise). Such excessive noise would be a significant impact on gnatcatcher breeding but is

mitigable to less than significant levels (Class II) with implementation of Mitigation Measure B-7e, which requires monitoring for disturbance of nesting activities and taking action to stop the disturbance.

Mitigation Measures for Impact B-7M: Direct or indirect loss of coastal California gnatcatcher or direct loss of habitat

- B-1a** Provide restoration/compensation for affected sensitive vegetation communities.
- B-1c** Conduct biological monitoring.
- B-2a** Provide restoration/compensation for affected jurisdictional areas.
- B-7l** Conduct coastal California gnatcatcher surveys and implement appropriate avoidance/minimization/compensation strategies.

Impact B-9: Construction or operational activities would adversely affect linkages or wildlife movement corridors, the movement of fish, and/or native wildlife nursery sites (Class II for bat colonies; No Impact for linkages, wildlife movement corridors, or fish movement)

The Modified Route D Alternative would not significantly impact or restrict general wildlife movement. This alternative would implement BIO-APM-2, BIO-APM-3, BIO-APM-5, BIO-APM-18, and BIO-APM-29, as described in Table D.2-5, to minimize or prevent potential adverse effects to linkages or wildlife corridors, the movement of fish, and native wildlife nursery sites. Due to the intermittent locations of construction activity, and since impacts to native habitats at each structure location would be relatively small, wildlife would not be prevented from moving around any project equipment within the transmission corridor (No Impact).

Surface water resources along the Modified Route D Alternative include the Sweetwater River, several named creeks, and other unnamed streams, the majority of which are dry at most times and unlikely to support fish populations. The majority of these watercourses (including the Sweetwater River and Cottonwood Creek) would be spanned by transmission lines; impacts associated with access road construction across streams would occur in accordance with BIO-APM-5 that limits impacts to watercourses through project design. Therefore, this alternative is not expected to affect the movement of fish (No Impact).

Even with implementation of the APMs, bat nursery colonies would still be significantly impacted by the Modified Route D Alternative if humans approach an active nursery colony, if entrances to nursery colony sites become blocked, if construction involves blasting or drilling that causes substantial vibration of the earth/rock surrounding an active nursery colony, or if a structure such as a bridge is disturbed by construction. These colonies could be located in rock crevices, caves, or culverts; inside/under bridges; in other man-made structures; and in trees (typically snags or large trees with cavities). A bat nursery colony site is where pregnant female bats assemble (or one bat if it's of a solitary species) to give birth and raise their pups.

The impacts to bat nursery colonies would be significant according to Significance Criterion 4 (impede the use of native wildlife nursery sites). The impacts would be significant because the APMs are not specific enough or do not provide enough mitigation to adequately compensate for the impacts. The measures in the APMs shall still apply except where the mitigation measures are more specific or more restrictive than the APM requirements. In those instances, the mitigation measures take precedence. This impact is significant but mitigable to less than significant levels (Class II) with implementation of Mitigation Measure B-9a which includes surveying for bat colonies; prohibiting approach of, or entrance to, an active nursery colony site; and implementation of methods to minimize potential indirect impacts to a colony site from falling rock or substantial vibration.

Mitigation Measure for Impact B-9: Construction or operational activities would adversely affect linkages or wildlife movement corridors, the movement of fish, and/or native wildlife nursery sites

B-9a Survey for bat nursery colonies.

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

The types of potential impacts related to collision are the same as those described for the Proposed Project in Section D.2.5.10. It is anticipated that the Modified Route D Alternative would not present an electrocution risk to birds.

Mortality as a result of collision with Modified Route D Alternative project features would be greatest where the movements of migrating birds are the most concentrated. However, there is no known concentrated movement of migrating birds in Imperial County or San Diego County in the vicinity of this alternative (Unitt, 2007), and there is a lack of any topography to funnel migrating birds through the vicinity of this alternative. Most observations of migrating birds are of scattered individuals and small flocks (particularly of the Swainson's hawk).

However, there is no known concentrated movement of migrating birds in San Diego County in the vicinity of this alternative; most observations are of scattered individuals and small flocks. Given the lack of any topography to funnel migrating birds through the vicinity of this alternative, the migration is probably scattered (Unitt, 2007).

Even so, since most birds migrate at night, and migration corridors have never been studied systematically (their use by birds has had to be pieced together from anecdotes), there is no way to know how many birds and what species of birds could actually be impacted by collision with the project transmission lines, towers, poles, or static wires. There is no way to know because much of the migration occurs at night when it cannot be seen, and birds that collide with transmission line features and fall to the ground are often taken away by predators/scavengers before morning. Therefore, as with the Proposed Project, it is assumed that some migrating species could be federal or State listed or of other special status, and their mortality would be a significant impact that is not mitigable to less than significant levels (Class I) according to 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. (directly or indirectly cause the mortality of candidate, sensitive, or special status wildlife species), and 1.g. (result in the killing of migratory birds). Also, like the Proposed Project, for non-sensitive species or species that migrate during the day, collision would be significant according to Significance Criteria 1.f. and 1.g. but would be mitigable to less than significant levels (Class II) with implementation of Mitigation Measure B-10a.

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

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

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

Common ravens have been documented to prey on the desert tortoise and the FTHL (Liebezeit et al., 2002; Flat-Tailed Horned Lizard Interagency Coordinating Committee, 2003), which do not occur

along this alternative. The common raven has not been documented to prey on any other listed or sensitive wildlife in the vicinity of this alternative (Liebezeit et al., 2002), although the predation may still occur but would be adverse but less than significant (Class III). No mitigation measure is required.

Impact B-12: Maintenance activities would result in disturbance to wildlife and could result in wildlife mortality (Class II for special-status wildlife and nesting birds; Class III for non-sensitive wildlife)

The following APMs, as set forth in Table D.2-5, would be implemented to minimize or prevent disturbance to wildlife and wildlife mortality during project maintenance: BIO-APM-3, BIO-APM-4, BIO-APM-6, BIO-APM-7, BIO-APM-9, BIO-APM-10 through BIO-APM-13, and BIO-APM-16. These APMs include restricting work to within existing access roads; observing a 15-mile-per hour speed limit on dirt roads; complying with regulations protecting wildlife and its habitat; prohibiting litter; conducting a pre-activity survey prior to brush clearing around project facilities (if it has been two years since the last clearing); prohibiting harm to, and feeding of, wildlife; and identifying environmentally sensitive tree trimming locations. With implementation of the APMs, impacts to non-sensitive wildlife would be adverse but less than significant (Class III). No mitigation measure is required.

These types of impacts would occur from maintenance: impacts to nesting birds if vegetation is cleared during the breeding season; impacts to eagles if maintenance activities occur within 4,000 feet of an active eagle nest; and/or mortality of special status species from grading, vegetation clearing, or use of access roads.

Even with implementation of the APMs, disturbance to wildlife and potential wildlife mortality would be significant according to Significance Criteria 1.a. (impacts to one or more listed species), 1.e. (impacts to breeding eagles), 1.f. (impacts that directly/indirectly cause the mortality of candidate, sensitive, or special status species), 1.g. (violation of the Migratory Bird Treaty Act), and 1.h. (violation of the Bald Eagle Protection Act). The impacts would be significant because the APMs are not specific enough or do not provide enough mitigation to adequately compensate for the impacts. The measures in the APMs shall still apply except where the mitigation measures are more specific or more restrictive than the APM requirements. In those instances, the mitigation measures take precedence. Impacts to eagles and other special-status wildlife species from maintenance activities are significant but mitigable to less than significant levels (Class II) through implementation of Mitigation Measures B-7h and B-12a.

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

Maintenance activities would impact the coastal California gnatcatcher, least Bell's vireo, and southwestern willow flycatcher if the noise threshold (i.e., 60 dB[A] Leq hourly) is met or exceeded at the edge of their nesting territories during their breeding seasons. Maintenance activities would also impact the golden eagle if activities would occur within 4,000 feet of an active golden eagle nest. These impacts would be significant but mitigable to less than significant levels (Class II) with implementation of Mitigation Measures B-7h and B-12a.

Maintenance activities would cause disturbance to, and possible mortality of arroyo toad and QCB. These impacts would be significant but mitigable to less than significant levels (Class II) with implementation of Mitigation Measures B-12b and B-12c.

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

- B-7h** Implement appropriate avoidance/minimization strategies for eagle nests.
- B-12a** Conduct maintenance activities outside the general avian breeding season.
- B-12b** Conduct maintenance when arroyo toads are least active.
- B-12c** Maintain access roads and clear vegetation in quino checkerspot butterfly habitat.

E.4.2.3 Modified Route D Substation

The Modified Route D Substation is located near MP MRD-34.0. The predominant vegetation community at the substation site is chaparral. The other vegetation community at the substation site is non-native grasslands. Permanent impacts associated with the construction of the substation include clearing and grading for the substation site and several access roads. Impacts to vegetation communities, plant species, and wildlife species occurring at the Modified Route D Substation are included with the impact analysis for the Modified Route D Alternative (Section E.4.1).

E.4.2.4 Star Valley Option

Environmental Setting

The Star Valley Option is in the South Coast bioregion and would only be used in combination with the Modified Route D Alternative, diverging west at MP MRD-34.1 (MP SV-0). The option is 3 miles long and would replace approximately 2.2 miles of the Modified Route D Alternative and approximately 2.3 miles of the I-8 Alternative. The final approximately 0.4 miles of this option would be underground along Star Valley Road.

Vegetation Communities. The predominant vegetation community along this alternative is chaparral. Other vegetation communities in this option include sage scrub, southern willow scrub, and oak riparian woodlands. Jurisdictional habitat in this option includes oak riparian woodlands. Vegetation communities are described in Section D.2.1.2.2. Detailed vegetation mapping for the Star Valley Option can be found in Appendix 8J. A generalized vegetation map for all of the SWPL Alternatives is presented in Figure E.1.2-1.

Since a formal delineation has not yet been conducted, the precise presence and extent of waters and wetlands at this time is unknown. However, the following vegetation communities that were identified during vegetation mapping along the alternative route are often jurisdictional: southern willow scrub and southern coast live oak riparian forest.

Overview of Special Habitat Management Areas. This option would cross the Cleveland National Forest.

Designated Critical Habitat. This option would not cross designated critical habitat.

Special Status Plant Species. No focused plant surveys were conducted along this option in 2007 because it was designed subsequent to the rare plant survey season.

No additional listed or special status plant species beyond those listed in Section E.4.1 for the Modified Route D Alternative are expected to occur in the Star Valley Option.

Special Status Wildlife Species. No focused wildlife surveys were conducted along this option in 2007.

No additional listed or special status wildlife species beyond those listed in Section E.4.1 for the Modified Route D Alternative are expected to occur in the Star Valley Option.

Environmental Impacts and Mitigation Measures

This section presents a discussion of impacts and mitigation measures for the Star Valley Option as a result of construction, operation, and maintenance of the project.

Several general impacts to biological resources would occur with this option, and impact significance would be the same as for the Proposed Project. For these impacts, the mitigation measures presented for the Proposed Project would also be required for this option. Discussion of each of these impacts is presented in the Proposed Project impact analysis in Sections D.2.5 to D.2.16.

- Impact B-3: Construction activities would result in the introduction of invasive, non-native, or noxious plant species (Class II), Mitigation Measure B-1a (Provide restoration/compensation for affected sensitive vegetation communities), Mitigation Measure B-2a (Provide restoration/compensation for affected jurisdictional areas), and Mitigation Measure B-3a (Prepare and implement a Weed Control Plan)
- Impact B-4: Construction activities would create dust that would result in degradation of vegetation (Class III).
- Impact B-6: Construction activities, including the use of access roads, would result in disturbance to wildlife and result in wildlife mortality (Class III).
- Impact B-8: Construction activities would result in a potential loss of nesting birds (violation of the Migratory Bird Treaty Act, Class II), Mitigation Measure B-8a (Conduct pre-construction surveys and monitoring for breeding birds).

Several other general impacts to biological resources would occur with this option, and impact significance would be the same as for the Modified Route D Alternative. For these impacts, the mitigation measures presented for the Modified Route D Alternative would also be required for this option. Discussion of each of these impacts is presented in the Modified Route D Alternative impact analysis in Section E.4.1.

- Impact B-2: Construction activities would result in adverse effects to jurisdictional waters and wetlands through vegetation removal, placement of fill, erosion, sedimentation, and degradation of water quality (Class II), Mitigation Measure B-1c (Conduct biological monitoring), Mitigation Measure B-2a (Provide restoration/compensation for impacted jurisdictional areas).
- Impact B-9: Construction or operational activities would adversely affect linkages or wildlife movement corridors, the movement of fish, and/or native wildlife nursery sites (Class II for bat colonies; No Impact for linkages, wildlife movement corridors, or fish movement), Mitigation Measure B-9a (Survey for bat nursery colonies).
- Impact B-11: Presence of transmission lines would result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers (Class III).

Impacts and the required mitigation measures that differ from the Proposed Project are addressed below.

Impact B-1: Construction activities would result in temporary and permanent losses of native vegetation (Class I for sensitive vegetation, vegetation management, and type conversion; Class III for non-sensitive vegetation; No Impact for RCAs)

Construction of the Star Valley Option would cause both temporary (during construction from vegetation clearing) and permanent (displacement of vegetation with project features such as towers and permanent access roads) impacts to vegetation communities (see Table E.4-3). These impacts and the corresponding mitigation requirements listed in Table E.4-3 are based on preliminary project design and would likely be revised during final project design. Vegetation communities listed in Table E.4-3 are described in Section D.2.1.2.2. Construction activities would also result in the alteration of soil conditions, including the loss of native seed banks and changes in topography and drainage, such that the ability of a site to support native vegetation after construction is impaired.

The following APMs, as set forth in Table D.2-5, would be implemented to avoid or minimize impacts to vegetation communities: BIO-APM-1 and 2, BIO-APM-4 through BIO-APM-6, BIO-APM-16, BIO-APM-17, BIO-APM-20, BIO-APM-23, and BIO-APM-25. Even with implementation of the APMs, however, the impacts to sensitive vegetation communities would be significant according to Significance Criterion 2.a (substantial adverse effect on a riparian habitat or other sensitive natural community by temporarily or permanently removing it during construction, grading, clearing, or other activities).

Impacts to sensitive vegetation communities are not mitigable to less than significant levels (Class I) because adequate mitigation land may not be available to compensate for the impacts. Impacts to developed areas and disturbed habitat would be adverse but less than significant (Class III), and no mitigation is required. Implementation of Mitigation Measures B-1a and B-1c are required to, at least in part, compensate for impacts to sensitive vegetation communities.

Riparian Conservation Areas (RCAs). Impacts to RCAs are not allowed on NFS lands, in accordance with the Forest Plan (USDA, 2005). The Star Valley Option would not impact RCAs (No Impact).

Table E.4.2-3. Impacts to Vegetation Communities and Required Mitigation – Star Valley Option

Vegetation Communities	Permanent Impacts			Temporary Impacts				Total Offsite Mitigation
	Impact	Ratio	Offsite Mitigation	Impact	Ratio	Onsite Restoration	Offsite Mitigation	
Non-Native Vegetation, Developed Areas, and Disturbed Habitat								
Developed	0.10	0	0.00	0.37	0	0.00	0.00	0.00
Subtotal	0.10	--	0.00	0.37	--	0.00	0.00	0.00
Coastal and Montane Scrub Habitats								
Coastal sage scrub – inland form	0.28	1.5:1	0.42	0.00	1:1	0.00	0.00	0.42
Diegan coastal sage scrub	0.00	1.5:1	0.00	0.00	1:1	0.00	0.00	0.00

Table E.4.2-3. Impacts to Vegetation Communities and Required Mitigation – Star Valley Option

Vegetation Communities	Permanent Impacts			Temporary Impacts				Total Offsite Mitigation
	Impact	Ratio	Offsite Mitigation	Impact	Ratio	Onsite Restoration	Offsite Mitigation	
Subtotal	0.28	--	0.42	0.00	--	0.00	0.00	0.42
Chaparrals								
Chamise chaparral	1.41	1:1	1.41	1.11	1:1	1.11	0.00	1.41
Northern mixed chaparral	6.31	1:1	6.31	6.14	1:1	6.14	0.00	6.31
Northern mixed chaparral (disturbed)	0.00	1:1	0.00	0.00	1:1	0.00	0.00	0.00
Subtotal	7.72	--	7.72	7.25	--	7.25	0.00	7.72
Riparian Scrubs								
Southern willow scrub	0.00	3:1	0.00	0.00	2:1	0.00	0.00	0.00
Subtotal	0.00	—	0.00	0.00	—	0.00	0.00	0.00
Riparian Forests and Woodlands								
Southern coast live oak riparian forest	0.07	3:1	0.21	0.00	2:1	0.00	0.00	0.21
Subtotal	0.07	--	0.21	0.00	--	0.00	0.00	0.21
GRAND TOTAL	8.17	--	8.35	7.62	--	7.25	0.00	8.35

Vegetation Management (Loss of Trees). SDG&E made no estimates as to how many trees or shrubs would be removed or trimmed as part of vegetation management for this option. However, there are native forest communities present along the route (see Table E.4.2-3) that support trees that would likely require either removal or trimming. The impact significance (Class I for native species and Class II for non-native species) and required mitigation associated with vegetation management (Mitigation Measure B-1a) for this option is the same as that described in Impact B-1 for the Modified Route D Alternative (Section E.4.2.1).

Type Conversion. As discussed in Section E.4.2.1 for the Modified Route D Alternative, the construction and operation of new transmission lines in areas with high fire risk could cause wildfires, and could reduce the effectiveness of fire fighting efforts. The impacts and mitigation associated with type conversion for the Star Valley Option are the same as that described in Impact B-1 for the Modified Route D Alternative (Section E.4.2.1).

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

B-1a Provide restoration/compensation for affected sensitive vegetation communities. Mitigation ratios and mitigation acreages for the Star Valley Option are provided in Table E.4.2-3.

B-1c Conduct biological monitoring.

B-1k Re-seed disturbed areas after a transmission line caused fire.

Impact B-5: Construction activities would result in direct or indirect loss of listed or sensitive plants or a direct loss of habitat for listed or sensitive plants (Class I)

Listed or sensitive (special status) plant species impacts would result from direct loss of known locations of individuals, or direct loss of potential habitat as a result of temporary or permanent grading or

vegetation clearing during construction. Focused plant species surveys were not conducted in 2007 because this option was designed subsequent to the rare plant survey season.

No additional listed or special status wildlife species beyond those listed in Section E.4.1 for the Modified Route D Alternative are expected to occur in the Star Valley Option. The Star Valley Option would not cross USDA Forest Service modeled habitat (USDA, 2007) for any listed species. Table E.1.2-1 contains specific information about the special status plant species and their listing or sensitivity status.

Because it is not possible to assess the impacts to special status plant species with potential to occur (because surveys were not conducted), and because the possibility exists that the results of a rare plant survey would result in a significant impact, the overall impacts to special status plant species would be considered significant and not mitigable to less than significant levels (Class I). Implementation of Mitigation Measures B-1a, B-1c, B-2a, and B-5a is required to, at least in part, compensate for impacts to special status plant species.

The following APMs would be implemented for this option to minimize or avoid significant impacts to listed or sensitive plant species or their habitats: BIO-APM-1 through 6, BIO-APM-8, BIO-APM-13, BIO-APM-18, and BIO-APM-22. Even with implementation of the APMs, impacts to special status plant species would be significant according to Significance Criterion 1.a. (impact to one or more individuals of a species that is federal or State listed as endangered or threatened) and Significance Criterion 1.b. (impact that would affect the number or range or regional long-term survival of a sensitive or special status plant species).

With the exceptionally dry weather conditions in 2007, the assumption is made that special status plant species are present and impacted by this alternative. Since it is not possible to adequately assess the amount of impact to the special status plant species, the impacts are considered significant and not mitigable to less than significant levels (Class I). Implementation of Mitigation Measures B-1a, B-1c, B-2a, and B-5a is required to, at least in part, compensate for impacts to special status plant species.

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

- B-1a** Provide restoration/compensation for affected sensitive vegetation communities.
- B-1c** Conduct biological monitoring.
- B-2a** Provide restoration/compensation for affected jurisdictional areas.
- B-5a** Conduct rare plant surveys and implement appropriate avoidance/minimization/mitigation strategies.

Impact B-7: Direct or indirect loss of listed or sensitive wildlife or a direct loss of habitat for listed or sensitive wildlife (Class I for construction impacts to sensitive species; Other impact classes depend on species; see individual discussions)

The Star Valley Option would impact the following listed or highly sensitive wildlife species: least Bell's vireo (Impact B-7D), southwestern willow flycatcher (Impact B-7E), golden eagle (Impact B-7H), quino checkerspot butterfly (Impact B-7J) and arroyo toad (Impact B-7K). This option could also impact bald eagle (Impact B-7I). Impacts to these species are discussed in detail below.

The following listed or highly sensitive species that are addressed for the Proposed Project are not addressed for the Star Valley Option because they either do not occur, or have low potential to occur,

in the alternative study area: Flat-Tailed horned lizard (Impact B-7A), Peninsular bighorn sheep (Impact B-7B), burrowing owl (Impact B-7C), desert pupfish (Impact B-7F), desert tortoise (Impact B-7G), Stephens' kangaroo rat (Impact B-7L), coastal California gnatcatcher (Impact B-7M), San Diego and/or Riverside fairy shrimp (Impact B-7N), and barefoot banded gecko (Impact B-7O).

Additionally, the Star Valley Option has the potential to impact the 55 non-listed, sensitive wildlife species with moderate to high potential to occur (listed at the beginning of E.4.1 [Special Status Wildlife Species]) should they be present.

The following APMs, as set forth in Table D.2-5, would be implemented to minimize or prevent direct or indirect loss of listed or sensitive wildlife or a direct loss of habitat for listed or sensitive wildlife: BIO-APM-2 through 4, BIO-APM-7, BIO-APM-14, BIO-APM-16, BIO-APM-24, BIO-APM-26, BIO-APM-27, and BIO-APM-29. Even with implementation of the APMs, the Star Valley Option would have a substantial adverse effect on listed and sensitive wildlife species and their habitats according to Significance Criterion 1 (substantial adverse effect, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the Wildlife Agencies).

Most of the non-listed special status species' habitats are sensitive vegetation communities (Table E.4.2-3); the mitigation for the loss of the sensitive vegetation communities (Mitigation Measure B-1a) would normally compensate for the potential loss of these sensitive species and their habitats. However, since adequate land required by Mitigation Measure B-1a may not be available, the impacts to non-listed sensitive wildlife species are considered significant and not mitigable to less than significant levels (Class I). Implementation of Mitigation Measures B-1a, B-1c, B-2a, and B-7a is required to compensate, at least in part, for impacts to non-listed, sensitive wildlife species and their habitats.

Mitigation Measures for Impact B-7: Direct or indirect loss of listed or sensitive wildlife or a direct loss of habitat for listed or sensitive wildlife

- B-1a** Provide restoration/compensation for affected sensitive vegetation communities..
- B-1c** Conduct biological monitoring.
- B-2a** Provide restoration/compensation for affected jurisdictional areas.
- B-7a** Ensure that all steep-walled trenches or excavations used during construction shall be covered to prevent the entrapment of wildlife (e.g., reptiles and small mammals).

Impact B-7D: Direct or indirect loss of least Bell's vireo or direct loss of habitat (Class II)

Habitat assessments and focused surveys for the least Bell's vireo were not conducted in 2007. However, suitable habitat for the least Bell's vireo is expected to occur at MP SV-1.5 (Sweetwater River). The species is assumed to be present at SV-1.5 because focused surveys were not completed. However, construction of the Star Valley Option would not result in impacts to riparian vegetation near SV-1.5.

Least Bell's vireo breeding can be affected by excessive construction noise (considered by the USFWS [USFWS, 2007c; American Institute of Physics, 2005] to be 60 dB(A) Leq at the edge of occupied habitat). This impact would be significant according to Significance Criterion 4.d. (adversely affect wildlife through an increase in noise). Such excessive noise would be a significant impact on vireo breeding but is mitigable to less than significant levels (Class II) with implementation of Mitigation Measure B-7e, which requires monitoring for disturbance of nesting activities and taking action to stop the disturbance.

Mitigation Measure for Impact B-7D: Direct or indirect loss of least Bell's vireo or direct loss of habitat

B-7e Conduct least Bell's vireo and southwestern willow flycatcher surveys and implement appropriate avoidance/minimization/compensation strategies.

Impact B-7E: Direct or indirect loss of southwestern willow flycatcher or direct loss of habitat (Class II)

Habitat assessments and focused surveys for the southwestern willow flycatcher were not conducted in 2007. However, suitable habitat for the southwestern willow flycatcher is expected to occur at MP SV-1.5 (Sweetwater River). The species is assumed to be present at SV-1.5 because focused surveys were not completed. However, construction of the Star Valley Option would not result in impacts to riparian vegetation near SV-1.5.

Southwestern willow flycatcher breeding can be affected by excessive construction noise (considered by the USFWS [USFWS, 2007c; American Institute of Physics, 2005] to be 60 dB(A) Leq at the edge of occupied habitat). This impact would be significant according to Significance Criterion 4.d. (adversely affect wildlife through an increase in noise). Such excessive noise would be a significant impact on southwestern willow flycatcher breeding but is mitigable to less than significant levels (Class II) with implementation of Mitigation Measure B-7e, which requires monitoring for disturbance of nesting activities and taking action to stop the disturbance.

Mitigation Measure for Impact B-7E: Direct or indirect loss of southwestern willow flycatcher or direct loss of habitat

B-7e Conduct least Bell's vireo and southwestern willow flycatcher surveys and implement appropriate avoidance/minimization/compensation strategies.

Impact B-7H: Direct or indirect loss of golden eagle or direct loss of habitat (Class I)

As noted in Section D.2.11, the golden eagle is very sensitive to human activity, especially in the vicinity of its nest site, and even distant construction activity (or maintenance activity; see Impact B-12) could cause abandonment of a nest, subsequent reproductive failure, and continuing decline of the species. These impacts would be significant according to Significance Criteria 1.e (substantial adverse effect on the breeding success of the golden eagle), 1.f (directly or indirectly cause the mortality of a special status species), 1.g (result in the abandonment of migratory bird nests and/or eggs), and 1.h (result in take of bald or golden eagles, eagle eggs or any part of an eagle). Human activity within 4,000 feet of a nest site is considered significant and not mitigable to less than significant levels (Class I), especially if there is direct line-of-sight between the nest site and the human activity, or if the human activity occurs above the nest site in elevation. An exception to this is if the activity within 4,000 feet of the nest site (without direct line-of-site and activity is below the nest site) occurs where there is already an existing disturbance such as a road or utility corridor.

One golden eagle nest area would be affected by the Star Valley Option. The specific location of this nest area is not disclosed in this EIR/EIS (nor are the MPs within 4,000 feet of the nest area) in order to protect the golden eagle. SDG&E will be made aware of the MPs subject to mitigation in an unpublished document. Nest locations, for purposes of this document, were provided by the Wildlife Research Institute (Bittner, 2007).

The nest area occurs approximately 1,500 feet from the Star Valley Option. There is direct line-of-site between this nest area and the project. 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-site 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.

Impacts/mitigation relating to golden eagles and electrocution/collision with transmission towers/lines is discussed in Impact B-10 below.

Mitigation Measure for Impact B-7H: Direct or indirect loss of golden eagle or direct loss of habitat

B-7h Implement appropriate avoidance/minimization strategies for eagle nests.

Impact B-7I: Direct or indirect loss of bald eagle or direct loss of habitat (No Impact)

The Star Valley Option would cross USDA Forest Service modeled habitat for bald eagle (USDA, 2007) at MP SV-1.5 (Sweetwater River). Bald eagles are not known to nest or winter in the vicinity of this option (Bittner, 2007; USDA, 2007). At its closest point (at SV-0.0), the Star Valley Option is approximately 6 miles away from reported bald eagle sightings (Appendix 8c). There is a low potential that bald eagles would use the habitat along the Sweetwater River for foraging during the winter.

No impacts to bald eagle as a result of the Star Valley Option are expected. Impacts/mitigation relating to bald eagles and electrocution/collision with transmission towers/lines is discussed in Impact B-10 below.

Impact B-7J: Direct or indirect loss of quino checkerspot butterfly or direct loss of habitat (Class I)

Protocol surveys for the QCB were not conducted in 2007 for the Star Valley Option. As a result, no presence/absence data for this species is available for this option; therefore a precise impact determination cannot be adequately made.

The entire Star Valley Option occurs within USFWS protocol Survey Area 2, an area in which protocol surveys are required in suitable QCB habitat. The closest QCB observations were made in 2003 and 2004, approximately 3 miles southwest of the Star Valley Option (USFWS, 2006). No critical habitat for this species occurs along this option; the nearest critical habitat is approximately 12 miles southwest of the Star Valley Option.

While it is unlikely that the Star Valley Option would impact very much (if any) QCB-occupied habitat within Survey Area 2 given the very limited number of recent sightings, with the lack of definitive survey data, the Star Valley Option would have a significant impact on this species according to Significance Criterion 1.a. (impact one or more individuals of a species that is federal or State listed as endangered or threatened). Implementation of Mitigation Measures B-1a, B-1c, B-2a, and B-7i is required to, at least in part, mitigate for impacts to the QCB butterfly and its habitat. Mitigation Measure B-7i requires a pre-construction survey for the species be conducted within any designated USFWS QCB survey area. Since adequate land required by Mitigation Measure B-7i may not be available, the impacts are considered significant and not mitigable to less than significant levels (Class I).

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

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

- B-1c** Conduct biological monitoring.
- B-2a** Provide restoration/compensation for affected jurisdictional areas.
- B-7i** Conduct quino checkerspot butterfly surveys and implement appropriate avoidance/minimization/compensation strategies.

Impact B-7K: Direct or indirect loss of arroyo toad or direct loss of habitat (Class II)

Habitat assessments and focused surveys for the arroyo toad were not conducted in 2007 for the Star Valley Option. However, suitable habitat for the arroyo toad is expected to occur at MP SV-1.5 (Sweetwater River). The species is assumed to be present at SV-1.5 because focused surveys were not completed, and all habitat within 1 km of SV-1.5 is assumed to be occupied by the species, in accordance with USFWS (1999).

Impacts to the arroyo toad or its occupied breeding or burrowing habitat from habitat removal or disturbance from construction (e.g., crushing of toads with construction equipment) of the Route D Alternative where the toad is known to occur (San Diego River) and assumed to be present (Ritchie Creek) include: less than 0.1 acres of permanent impacts to breeding habitat, 19.5 acres of permanent impacts to upland burrowing habitat, and 7.5 acres of temporary impacts to upland burrowing habitat.

Impacts to the arroyo toad or its occupied breeding or burrowing habitat from habitat removal or disturbance from construction (e.g., crushing of toads with construction equipment) of the Star Valley Option where the toad is assumed to be present include 1.4 acres of temporary impacts to upland burrowing habitat and 3.6 acres of permanent impacts to breeding habitat. These impacts would be significant according to Significance Criterion 1.a. (impact to one or more individuals of a species that is federal or State listed as endangered or threatened). These impacts would be significant but mitigable to less than significant levels (Class II) through implementation of Mitigation Measures B-1a, B-1c, B-2a, and B-7j. The pre-construction survey required in Mitigation Measure B-7j would conclusively define all the impacts to the arroyo toad from construction of the Star Valley Option (i.e., if appropriate climatic conditions are present to encounter arroyo toads). The mitigation in Mitigation Measure B-7j may need to be reduced based on the results of this survey. It is expected that appropriate mitigation land would be available to satisfy the mitigation requirement because of the small number of acres needed and because this type of mitigation for the arroyo toad is typically available and regularly provided in San Diego County.

Mitigation Measures for Impact B-7K: Direct or indirect loss of arroyo toad or direct loss of habitat

- B-1a** Provide restoration/compensation for affected sensitive vegetation communities..
- B-1c** Conduct biological monitoring.
- B-2a** Provide restoration/compensation for affected jurisdictional areas.
- B-7j** Conduct arroyo toad surveys, and implement appropriate avoidance/minimization/compensation strategies. For the Star Valley Option, the required mitigation for arroyo toad occupied habitat includes 1.4 acres of on-site restoration and 8.6 acres of off-site acquisition and preservation of occupied toad upland burrowing habitat. All other arroyo toad mitigation described in Mitigation Measure B-7j for the Proposed Project (Section D.2.11) is also required for the Star Valley Option.

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

The types of potential impacts related to collision are the same as those described for the Proposed Project in Section D.2.5.10. It is anticipated that the Star Valley Option would not present an electrocution risk to birds.

Mortality as a result of collision with Star Valley Option project features would be greatest where the movements of migrating birds are the most concentrated. However, there is no known concentrated movement of migrating birds in San Diego County in the vicinity of this option (Unitt, 2007), and there is a lack of any topography to funnel migrating birds through the vicinity of this option. Most observations of migrating birds are of scattered individuals and small flocks.

Even so, since most birds migrate at night, and migration corridors have never been studied systematically, there is no way to know how many birds and what species of birds could actually be impacted by collision with the project transmission lines, towers, poles, or static wires. There is no way to know because much of the migration occurs at night when it cannot be seen, and birds that collide with transmission line features and fall to the ground are often taken away by predators/scavengers before morning. Therefore, as with the Proposed Project, it is assumed that some migrating species could be federal or State listed or of other special status, and their mortality would be a significant impact that is not mitigable to less than significant levels (Class I) according to 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. (directly or indirectly cause the mortality of candidate, sensitive, or special status wildlife species), and 1.g. (result in the killing of migratory birds). Also, like the Proposed Project, for non-sensitive species or species that migrate during the day, collision would be significant according to Significance Criteria 1.f. and 1.g. but would be mitigable to less than significant levels (Class II) with implementation of Mitigation Measure B-10a.

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

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

Impact B-12: Maintenance activities would result in disturbance to wildlife and could result in wildlife mortality (Class II for special-status wildlife and nesting birds; Class III for non-sensitive wildlife)

The following APMs, as set forth in Table D.2-5, would be implemented to minimize or prevent disturbance to wildlife and wildlife mortality during project maintenance: BIO-APM-3, BIO-APM-4, BIO-APM-6, BIO-APM-7, BIO-APM-9, BIO-APM-10 through BIO-APM-13, and BIO-APM-16. With implementation of the APMs, impacts to non-sensitive wildlife would be adverse but less than significant (Class III). No mitigation is required.

These types of impacts would occur from maintenance: impacts to nesting birds if vegetation is cleared during the breeding season; impacts to eagles if maintenance activities occur within 4,000 feet of an active eagle nest; and/or mortality of special status species from grading, vegetation clearing, or use of access roads.

Even with implementation of the APMs, disturbance to wildlife and potential wildlife mortality would be significant according to Significance Criteria 1.a. (impacts to one or more listed species), 1.e. (impacts to breeding eagles), 1.f. (impacts that directly/indirectly cause the mortality of candidate, sensitive, or special

status species), 1.g. (violation of the Migratory Bird Treaty Act), and 1.h. (violation of the Bald Eagle Protection Act). The impacts would be significant because the APMs are not specific enough or do not provide enough mitigation to adequately compensate for the impacts. The measures in the APMs shall still apply except where the mitigation measures are more specific or more restrictive than the APM requirements. In those instances, the mitigation measures take precedence. Impacts to eagles and other special-status wildlife species from maintenance activities are significant but mitigable to less than significant levels (Class II) through implementation of Mitigation Measures B-7h and B-12a.

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

Maintenance activities would impact the least Bell's vireo and southwestern willow flycatcher if the noise threshold (i.e., 60 dB[A] Leq hourly) is met or exceeded at the edge of their nesting territories during their breeding seasons. Maintenance activities would also impact the golden eagle if activities would occur within 4,000 feet of an active golden eagle nest. These impacts would be significant but mitigable to less than significant levels (Class II) with implementation of Mitigation Measures B-7h and B-12a.

Maintenance activities would cause disturbance to, and possible mortality of arroyo toad and QCB. These impacts would be significant but mitigable to less than significant levels (Class II) with implementation of Mitigation Measures B-12b and B-12c.

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

- B-7h** **Implement appropriate avoidance/minimization strategies for eagle nests.**
- B-12a** **Conduct maintenance activities outside the general avian breeding season.**
- B-12b** **Conduct maintenance when arroyo toads are least active.**
- B-12c** **Maintain access roads and clear vegetation in quino checkerspot butterfly habitat.**

E.4.2.5 PCT Reroute Option C/D

The PCT Reroute Option C/D would result in impacts to the same types of vegetation communities as the original Modified Route D/Option A. PCT Reroute Option C/D would result in greater permanent impacts to sensitive vegetation communities (9.8 acres for Option C/D versus 8.31 acres for Option A), which is partially attributable to the greater length of new access roads proposed for Option C/D. Option C/D would result in less temporary impacts to sensitive vegetation communities (12.1 acres for Option C/D versus 12.4 acres for Option A), less impacts to arroyo toad assumed occupied upland habitat (7.1 acres for Option C/D versus 9.4 acres for Option A), and no impacts to least Bell's vireo habitat (Option A would impact 0.4 acres of least Bell's vireo habitat).

The BLM requested an analysis of wildlife habitat fragmentation that would result from new access roads for each option (email from Janaye Byergo, dated 8/26/08). Option A would make improvements to an existing USDA Forest Service road and would use several other existing roads for access to the maximum extent, which would minimize fragmentation of wildlife habitat. The eastern portion of Option C/D would be constructed and maintained by helicopter and would not include new access roads. The western portion of Option C/D would include a new access road that is approximately 1.5

miles long and would traverse a largely undisturbed area. This would result in a greater amount of habitat fragmentation as compared to Option A.

Comparison of Impacts: Modified Route D Alternative and PCT Route Option C/D

Overall, the original Modified Route D/Option A is preferred biologically over PCT Reroute Option C/D because Option A would result in fewer permanent impacts to sensitive vegetation communities and would traverse through an area already containing Forest Service roads. Although Option A would impact occupied least Bell's vireo habitat due to improvements to an existing access road between Structures USFS 1107 and USFS 1108, it is expected that final engineering would minimize or avoid the majority of the impacts to the species.

E.4.2.5-6 Future Transmission System Expansion

For the Proposed Project and route alternatives along the Proposed Project route, Section B.2.7 identifies Future Transmission System Expansion routes for both 230 kV and 500 kV future transmission lines. These routes are identified, and impacts are analyzed in Section D of this EIR/EIS, because SDG&E has indicated that transmission system expansion is foreseeable, possibly within the next 10 years. For the SWPL alternatives, 500 kV and 230 kV expansions would also be possible. The potential expansion routes for the Route D Alternative are described in the following paragraphs.

230 and 500 kV Future Transmission System Expansion

The Modified Route D Alternative would begin at approximately Interstate 8 MP-47 and would head southwest then northward until it reached the Interstate 8 Alternative at approximately MP I8-71. A substation could be built to convert the 500 kV line to 230 kV at approximately MP MD-34, the Modified Route D Substation Alternative. The double-circuit 230 kV line would exit the substation overhead, then continue north into the CNF, joining the Interstate 8 Alternative at approximately MP I8-71 where it transitions to underground at the east end of Alpine Boulevard. The Modified Route D Substation would accommodate up to six 230 kV circuits and a 500 kV circuit. Only two 230 kV circuits are proposed at this time, but construction of additional 230 kV circuits and a 500 kV circuit out of the Modified Route D Substation may be required in the future. There are three routes that are most likely for these future lines; each is described below. Figure E.1.1-6 illustrates the potential routes of the future transmission lines.

- Two additional 230 kV circuits could be installed underground within Alpine Boulevard, with appropriate compact duct banks and engineering to avoid, or possibly relocate, existing utilities. This route would follow the Interstate 8 Alternative route from the Interstate 8 Alternative Substation until MP I8-70.8 where it would transition underground until MP I8-79 where it would transition overhead again. The future transmission line route would continue to follow the Interstate 8 Alternative's overhead 230 kV route to the point where it meets the Proposed Project at MP 131. See Section E.1.2.1 and E.1.2.2 for the Biological Resources setting, impacts, and mitigation measures along the I-8 route. The future transmission route would then join the proposed route corridor to the west, continuing past the Sycamore Canyon Substation to the Chicarita Substation. See Section D.2.2.4 and D.2.2.5 for the Biological Resources setting and Sections D.2.5 through D.2.15 for the Biological Resources impacts, and mitigation measures of the Inland Valley and Coastal Links of the Proposed Project. It could then follow the Proposed Project's 230 kV Future Transmission Expansion route (see description in Section B.2.7) from Chicarita to the Escondido Substa-

tion shown in Figure B-12a. See Section D.2.18 for the Biological Resources setting, impacts, and mitigation measures for the Future Transmission System Expansion of the Proposed Project.

- Additional 230 and 500 kV circuits could follow the Route D Alternative corridor (see description in Section E.3.1) to the north of Descanso, After following the Interstate 8 Alternative 230 kV route from the Interstate 8 Substation to MP I8-70.3. See Section E.3.2.1 and E.3.2.2 for the Biological setting, impacts, and mitigation measures along Route D. The Route D corridor would connect with the Proposed Project corridor at MP 114.5, and could then follow either: (1) the Proposed Project southwest to the Chicarita Substation and then follow the Proposed Project's 230 kV Future Transmission Expansion route (see description in Section B.2.7) from Chicarita to the Escondido Substation; or (2) the Proposed Project northeastward to the Proposed Central East Substation and then follow the Proposed Project's 500 kV Future Transmission Expansion route shown in Figure B-12b (see description in Section B.2.7). See Section D.2.2.3, D.2.2.4, and D.2.2.5 for the Biological Resources setting and Sections D.2.5 through D.2.15 for the Biological Resources impacts, and mitigation measures of the Central, Inland Valley, and Coastal Links of the Proposed Project. See Section D.2.18 for the Biological Resources setting, impacts, and mitigation measures for the Future Transmission System Expansion of the Proposed Project.
- The future 230 and 500 kV lines could follow the Modified Route D Alternative corridor (within the 368 Corridor identified by the Department of Energy's Draft West-wide Corridor Programmatic EIS) south for 8 miles to MP MD-26. See Section E.4.2.1 and E.4.2.2 for the Biological setting, impacts, and mitigation measures along Modified Route D. At MP MD-26, new 230 or 500 kV circuits would turn west and connect with the northern most segment of the West of Forest Alternative route as described in Section E.1.1. See Section E.1.2.5 for the Biological setting, impacts, and mitigation measures along MP MD-26 to MP I8-79 corridor. This route would meet up with the Interstate 8 Alternative at approximately MP I8-79 and would follow the Interstate 8 Alternative's overhead 230 kV route to the point where it meets the Proposed Project at MP 131 (for a description of the Interstate 8 transmission corridor see Section E.1.1). The future transmission route would then join the proposed route corridor to the west, continuing past the Sycamore Canyon Substation to the Chicarita Substation. It could then follow the Proposed Project's 230 kV Future Transmission Expansion System (see description in Section B.2.7) from Chicarita to the Escondido Substation.