

## E.2.2 Biological Resources

### E.2.2.1 Environmental Setting

The BCD Alternative is located in the Colorado Desert and South Coast bioregions. This 20-mile alternative would only be used in combination with the I-8 Alternative, diverging north at MP I8-39.4 (MP BCD-0). The predominant vegetation community is chaparral. Other vegetation communities in this alternative include desert scrub, sage scrub, grasslands, oak riparian forest, oak woodlands, and meadow. Vegetation communities are described in Section D.2.1.2.2. Detailed vegetation mapping for the BCD 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 that were identified during vegetation mapping along the alternative route are often jurisdictional: southern coast live oak riparian forest.

**Overview of Special Habitat Management Areas.** The majority of the BCD Alternative occurs on BLM and USDA Forest Service lands. This alternative would cross the In-Ko-Pah Mountains ACEC and would pass adjacent to the Carrizo Gorge Wilderness and Manzanita Indian Reservation. The BCD Alternative would not occur in or adjacent to any USDA Forest Service Inventoried Roadless Areas, Research Natural Areas, Critical Biological Areas, Designated or Proposed Wilderness, or Special Interest Areas.

**Overview of Special Habitat Management Areas.** The BCD Alternative would cross PBS critical habitat between MP BCD-3.9 to BCD-4.2 and between BCD-6.0 and BCD-6.5 (near the In-Ko-Pah Mountains).

**Special Status Plant Species.** One listed plant species is assumed to be present along the BCD Alternative based on USDA Forest Service modeled habitat (USDA, 2007): San Bernardino bluegrass. No listed plant species were observed along the BCD Alternative in 2007. Two non-listed sensitive plants (sticky geraea and desert beauty) were observed along the BCD Alternative in 2007:

- Sticky geraea
- San Bernardino bluegrass (assumed present)
- Desert beauty

The following four 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 BCD Alternative:

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

The following 29 non-listed, sensitive plant species have a moderate to high potential to occur within the vicinity of the BCD Alternative:

- Peninsular manzanita
- Jacumba milk-vetch
- San Diego milk-vetch
- Azenia
- Payson's jewel-flower
- Parish's chaenactis
- Long-spined spineflower
- Tecate tarplant
- Vanishing wild buckwheat
- Mission Canyon bluecup
- San Diego gumplant
- Ramona horkelia
- San Diego sunflower
- Mexican hulsea
- Slender-leaved ipomopsis
- Parish's meadowfoam
- Orcutt's linanthus
- Mountain Springs bush lupine
- Felt-leaved monardella
- Hall's monardella
- Baja navarretia
- Chaparral nolina
- Moreno currant
- Southern skullcap
- Hammitt's clay-cress
- Laguna Mountains jewel-flower
- Southern jewel-flower
- San Bernardino aster
- Velvety false lupine

**Special Status Wildlife Species.** One listed wildlife species was assumed to be present along the BCD Alternative in 2007.

- Arroyo toad (assumed present)

The following sensitive wildlife species were observed along the BCD Alternative in 2007:

- Coast (San Diego) horned lizard
- Gray vireo

The following five federal and/or State listed as rare, threatened, or endangered wildlife species have a moderate to high potential to occur within the vicinity of the BCD Alternative:

- Quino checkerspot butterfly
- Arroyo toad
- Barefoot banded gecko
- Swainson's hawk
- Peninsular bighorn sheep

The following 47 non-listed sensitive animal species have a moderate to high potential to occur within the construction zone of the BCD Alternative:

- 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
- Two-striped garter snake
- Bell's sage sparrow
- California horned lark
- Southern California rufous-crowned sparrow
- White-faced ibis
- White-tailed kite
- Yellow warbler
- American badger
- Colorado Valley woodrat
- 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

- Cooper’s hawk
- Ferruginous hawk (wintering)
- Golden eagle
- Grasshopper sparrow
- Loggerhead shrike
- Long-eared owl
- Northern harrier
- Prairie falcon
- Purple martin
- Sharp-shinned hawk (wintering)
- Pocketed free-tailed bat
- Ringtail
- San Diego black-tailed jackrabbit
- San Diego desert woodrat
- Small-footed myotis
- Southern grasshopper mouse
- Townsend’s big-eared bat
- Western mastiff bat
- Yuma myotis

### E.2.2.2 Environmental Impacts and Mitigation Measures

This section presents a discussion of impacts and mitigation measures for the BCD Alternative as a result of construction, operation, and maintenance of the project. Table E.2.2-1 summarizes the impacts of the BCD Alternative for biology.

**Table E.2.2-1. Impacts Identified – BCD Alternative – Biology**

Impact No.	Description	Impact Significance
<b>BCD Alternative</b>		
B-1	Construction activities would result in temporary and permanent losses of native vegetation	Class I 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
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 ( <b>includes impacts B-7B through B-7O for individual wildlife resources</b> )	Class I, II, III, 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 I, II, III
<b>BCD South Option</b>		
B-1	Construction activities would result in temporary and permanent losses of native vegetation	Class I 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

Table E.2.2-1. Impacts Identified – BCD Alternative – Biology

Impact No.	Description	Impact Significance
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

There are four impacts that would occur in all options and all alternatives. They are listed below and summarized in Section E.1.2.1 under “Impacts Common to All Alternatives”. Impact significance would be the same as for the Proposed Project; the mitigation measures addressed for each impact would also be required.

- Impact B-3 (Construction and operation/maintenance 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 Riparian Conservation Areas; Class III for non-sensitive vegetation)***

Construction of the BCD 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.2.2-2). Vegetation communities listed in Table E.2.2-2 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-17, BIO-APM-20, BIO-APM-23, and BIO-APM-25. Even with implementation of the APMs, however, 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 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 it is unknown if enough mitigation land is 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 unless impacts occur in designated critical habitat for a federal listed species (i.e., PBS). Implementation of Mitigation Measures B-1a and B-1c 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.

Some of the vegetation communities impacted occur within preserves that are part of regional conservation plans. Impacts to these areas are significant according to Significance Criterion 6.a. (conflict with the provisions of local, regional, or state habitat conservation plans and State Park policies/programs by placing development in preserves) and Significance Criterion 6.b. (impact biologically sensitive lands or preserves). Whether or not the BCD Alternative would conflict with the provisions of these plans/policies/programs is discussed in Section D.16.

**Riparian Conservation Areas (RCAs).** Impacts to RCAs are not allowed on NFS lands, in accordance with the Forest Plan (USDA, 2005). The BCD Alternative would impact RCAs (0.4 acres of permanent impacts and 0.3 acres of temporary impacts) through the construction of access roads, pull sites, laydown areas, and tower pads. 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.2.2-2. Impacts to Vegetation Communities and Required Mitigation – BCD Alternative

Vegetation Communities	Permanent Impacts			Temporary Impacts				Total Off-site Mitigation
	Impact	Ratio	Off-site Mitigation	Impact	Ratio	On-site Restoration	Off-site Mitigation	
<b>Non-Native Vegetation, Developed Areas, and Disturbed Habitat</b>								
Developed	0.01	0	0	0.00	0	0	0	0
Disturbed habitat	32.81	0	0	0.41	0	0	0	0
<b>Subtotal</b>	<b>32.82</b>	<b>--</b>	<b>0</b>	<b>0.41</b>	<b>--</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Desert Scrub and Dune Habitats</b>								
Sonoran desert scrub	0.66	2:1	1.32	0.00	2:1	0.00	0.00	1.32
<b>Subtotal</b>	<b>0.66</b>	<b>--</b>	<b>1.32</b>	<b>0.00</b>	<b>--</b>	<b>0.00</b>	<b>0.00</b>	<b>1.32</b>
<b>Coastal and Montane Scrub Habitats</b>								
Big sagebrush scrub	1.34	1.5:1	2.01	0.15	1:1	0.15	0	2.01
Big sagebrush scrub (disturbed)	0.13	1.5:1	0.20	0.00	1:1	0.00	0	0.20
Diegan coastal sage scrub – inland form	3.06	1.5:1	4.59	1.99	1:1	1.99	0	4.59
Diegan coastal sage scrub – inland form (disturbed)	1.61	1.5:1	2.42	0.00	1:1	0.00	0	2.42
Flat-topped buckwheat scrub	0.69	2:1	1.38	0.19	1:1	0.19	0	1.38
Flat-topped buckwheat scrub (disturbed)	0.09	2:1	0.18	0.00	1:1	0.00	0	0.18
<b>Subtotal</b>	<b>6.92</b>	<b>--</b>	<b>10.78</b>	<b>2.33</b>	<b>--</b>	<b>2.33</b>	<b>0.00</b>	<b>10.78</b>
<b>Grasslands and Meadows</b>								
Dry montane meadow	0.23	2:1	0.46	0.00	1:1	0.00	0	0.46
Non-native grassland	1.18	1:1	1.18	0.30	1:1	0.30	0	1.18
Non-native grassland (disturbed)	0.17	1:1	0.17	0.00	1:1	0.00	0	0.17
<b>Subtotal</b>	<b>1.58</b>	<b>--</b>	<b>1.81</b>	<b>0.30</b>	<b>--</b>	<b>0.30</b>	<b>0.00</b>	<b>1.81</b>
<b>Chaparrals</b>								
Chamise chaparral	6.50	1:1	6.50	1.85	1:1	1.85	0	6.50
Northern mixed chaparral	49.52	1:1	49.52	16.88	1:1	16.88	0	49.52
Northern mixed chaparral (disturbed)	8.54	1:1	8.54	0.01	1:1	0.01	0	8.54
Red shank chaparral	2.22	1:1	2.22	0.80	1:1	0.80	0	2.22
Scrub oak chaparral	1.45	1:1	1.45	0.43	1:1	0.43	0	1.45
Scrub oak chaparral (disturbed)	0.20	1:1	0.20	0.00	1:1	0.00	0	0.20
Semi-desert chaparral	18.24	1:1	18.24	11.64	1:1	11.64	0	18.24
Semi-desert chaparral (disturbed)	0.86	1:1	0.86	1.34	1:1	1.34	0	0.86
Southern mixed chaparral	1.87	1:1	1.87	1.10	1:1	1.10	0	1.87
<b>Subtotal</b>	<b>89.40</b>	<b>--</b>	<b>89.40</b>	<b>34.05</b>	<b>--</b>	<b>34.05</b>	<b>0</b>	<b>89.40</b>
<b>Woodlands and Forests</b>								
Coast live oak woodland	1.17	3:1	3.51	0.01	3:1	0.01	0.02	3.53
<b>Subtotal</b>	<b>1.17</b>	<b>--</b>	<b>3.51</b>	<b>0.01</b>	<b>--</b>	<b>0.01</b>	<b>0.02</b>	<b>3.53</b>
<b>Riparian Forests and Woodlands</b>								
Southern coast live oak riparian forest	0.00	3:1	0.00	0.00	2:1	0.00	0.00	0.00
<b>Subtotal</b>	<b>0.00</b>	<b>--</b>	<b>0.00</b>	<b>0.00</b>	<b>--</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>GRAND TOTAL</b>	<b>132.55</b>	<b>--</b>	<b>106.82</b>	<b>37.10</b>	<b>--</b>	<b>36.69</b>	<b>0.02</b>	<b>106.84</b>

**Vegetation Management (Loss of Trees).** SDG&E has estimated that 3 non-native trees (acacia, eucalyptus, and pine) and up to approximately 155 native oak trees would be removed to maintain proper clearance between vegetation and the transmission lines along the entire length of this alternative. 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 stated that this alternative would require trimming of 5 non-native trees (acacia, brisbane box, eucalyptus, and pine) and up to approximately 17 native oak trees. 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 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 for the Proposed Project, 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 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. 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 (Class I) 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 for the Proposed Project. 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.

*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 BCD Alternative are provided in Table E.2.2-2.

**B-1c** Conduct biological monitoring.

*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 BCD 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 along the alternative are often jurisdictional: 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. 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.



*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 habitat. Known locations of individuals are where a species was observed during on-the-ground surveys. Direct loss of known locations of individuals or habitat occurs from temporary or permanent grading or vegetation clearing. Indirect loss of individuals occurs in instances such as sediments transported (e.g., from cleared areas during rain events) that cover adjacent plants or changes in a plant's environment that cause its loss (e.g., adjacent shrubs that provided necessary shade are removed).

Focused plant species surveys were conducted in spring/summer of 2007 only where ROE permission was granted. Two non-listed sensitive plant species were observed along the BCD Alternative during 2007: sticky geraea and desert beauty (Appendix 8J-20). Additionally, one listed species is assumed to be present based on USDA Forest Service modeled habitat (USDA, 2007): San Bernardino bluegrass. 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 34 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, Jacumba milk-vetch, San Diego milk vetch, ayenia, Orcutt's brodiaea, Dunn's mariposa lily, Payson's jewel-flower, Parish's chaenactis, long-spined spineflower, Tecate tar-plant, vanishing wild buckwheat, Mission Canyon bluecup, San Diego gumplant, Ramona horkelia, San Diego sunflower, Mexican hulsea, slender-leaved ipomopsis, Parish's meadowfoam, Orcutt's linanthus, Mountain Springs bush lupine, felt-leaved monardella, Hall's monardella, Baja navarretia, chaparral nolina, Dehesa nolina, San Bernardino bluegrass, Moreno currant, southern skullcap, Gander's ragwort, Hammitt's clay-cress, Laguna Mountains jewel-flower, southern jewel-flower, San Bernardino aster, and velvety false lupine. 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 statuses, see Table E.1.2-1 in Section E.1.

The following APMs would be implemented for this alternative to address potential 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, the BCD Alternative would impact the following special status plant species:

**San Bernardino Bluegrass.** USDA Forest Service modeled habitat (USDA, 2007) for San Bernardino bluegrass occurs at MPs BCD-13.7, BCD-15.4, BCD-16.8, BCD-17.2, and BCD-18.8. It is assumed that the species is present throughout the modeled habitat due to inconclusive surveys in 2007, and as a result, vegetation clearing during construction would impact this species.

**Desert Beauty.** Desert beauty occurs at MP BCD-7.7 and between BCD-8.1 and BCD-8.5 (Appendix 8J, Figure Ap.8J-24). Approximately 6 and 28 individuals were observed at these locations, respectively. The BCD Alternative would directly impact as many as 10 individuals of this species through the removal of vegetation during construction as these individuals occur within the limits of proposed construction.

**Sticky Gerarea.** Two sticky gerarea occur at MP BCD-6.7 (Appendix 8J, Figure Ap.8J-24). The BCD Alternative would not impact this species as it is not present where temporary or permanent disturbances will occur.

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. See Table E.2.2-2.
- 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 impacts to sensitive species; Other impact classes depend on species; see individual discussions)*

The BCD Alternative would impact the following listed or highly sensitive wildlife species: PBS (Impact B-7B), golden eagle (Impact B-7H), QCB (Impact B-7J), and barefoot banded gecko (Impact B-7O). This alternative could also impact least Bell's vireo (Impact B-7D), southwestern willow flycatcher (Impact B-7E), and bald eagle (Impact B-7I). 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 I-8 Alternative because they either do not occur, or have low potential to occur, in the alternative study area: FTHL (Impact B-7A), burrowing owl (Impact B-7C), desert pupfish (Impact B-7F), desert tortoise (Impact B-7G), arroyo toad (Impact B-7K), Stephens' kangaroo rat (Impact B-7L), coastal California gnatcatcher (Impact B-7M), and San Diego and/or Riverside fairy shrimp (Impact B-7N).

The BCD Alternative would impact the following non-listed, sensitive wildlife species and their habitats: Coast (San Diego) horned lizard and gray vireo (Appendix 8J). This alternative also has the potential to impact the 47 non-listed, sensitive wildlife species with moderate to high potential to occur (listed at the beginning of E.2.2 [Special Status Wildlife Species]) should they be present.

**Coast (San Diego) horned lizard.** San Diego horned lizards were observed in two locations along the BCD Alternative at MPs BCD-7.4 and BCD-19.0 (Appendix 8J, Figure Ap.8J-24 and Ap.8J-26). This alternative would impact this species by habitat modification and the removal of vegetation. In addition, individuals of the species could be killed if they are within the construction zone and crushed by equipment.

**Gray vireo.** One gray vireo was observed at MP BCD-16.8 (Appendix 8J, Figure Ap.8J-25). This species is a rare breeding bird in chaparral habitats of San Diego County (Unitt, 2004). Construction would 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). In addition, this species would be indirectly impacted through removal of vegetation and habitat modification.

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 BCD 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). 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.

Most of the non-listed special status species' habitats are sensitive vegetation communities (Table E.2.2-1); 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. See Table E.2.2-1.
- 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-7B: Direct or indirect loss of Peninsular bighorn sheep or direct loss of habitat (Class I)*

The BCD Alternative would impact approximately 4.0 acres of PBS critical habitat (1.2 acres of temporary impact and 2.8 acres of permanent impact through habitat removal) during project construction. Impacts to critical habitat would occur from access roads and a pull site between MP BCD-3.6 and BCD-3.9 and an access road between BCD-5.9 and BCD-6.5. These impacts are significant according

to Significance Criterion 1.d (substantial adverse effect on designated critical habitat for a federal listed species through temporary or permanent disturbance).

As analyzed in Impact B-1, the impacts to the habitat itself are significant and not mitigable to less than significant levels (Class I) because suitable PBS replacement critical habitat, or other suitable habitat as determined by the Wildlife Agencies and BLM, may not be available.

The BCD Alternative would not create a barrier to PBS movement routes and would not fragment the population because it would occur along the western edge of suitable habitat for the species. Construction of the BCD Alternative would result in human and construction activity and project features in PBS habitat could cause bighorn to avoid affected areas and could interfere with the use of resources such as escape terrain; water; mineral licks; rutting, lambing, or feeding areas; the use of traditional movement routes, and/or could cause physiological stress or increased predation, all of which could adversely affect survival and recovery of the species. These impacts are significant according to the following Significance Criteria: 1.a.) substantial adverse effect through any impact to one or more individuals of a federal or State listed species; 1.f.) substantial adverse effect by any impact that directly or indirectly causes the mortality of special-status wildlife species; and 4.a.) substantial adverse effect by preventing access to foraging habitat, breeding habitat, water sources, etc. Based on the high sensitivity of this species and evidence that shows that human activities significantly affect it, these impacts would be significant and not mitigable to less than significant levels (Class I). Mitigation Measures B-1a, B-1c, B-2a, and B-7c would minimize BCD Alternative impacts on PBS, although not to less than significant levels.

***Mitigation Measures for Impact B-7B: Direct or indirect loss of Peninsular bighorn sheep 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-7c**      **Minimize impacts to Peninsular bighorn sheep and provide compensation for loss of critical habitat.** For the BCD Alternative, the required mitigation for PBS impacts includes off-site purchase of 16.3 acres and on-site restoration of 1.2 acres. All other PBS mitigation described in Mitigation Measure B-7c for the Proposed Project (Section D.2.11) is also required for the BCD Alternative.

***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 BCD-16.8 (Long Canyon) and BCD-17.2 (Kitchen Creek). Least Bell's vireo is known to occur less than 1 mile from the western end of the BCD Alternative, in Cottonwood Creek (CDFG CNDDDB, 2007; USDA, 2007).

The 2007 survey results were negative. Construction of the BCD Alternative would result in impacts to riparian vegetation with the potential to support least Bell's vireo. 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. 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. With the small number of acres likely required for mitigation (if any), it is expected that appropriate mitigation land would be available to satisfy the mitigation requirement.

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.**

*Impact B-7H: Direct or indirect loss of golden eagle or direct loss of habitat (Class I for nests within 4,000 feet; Class III for nests without direct line-of-site)*

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

The first nest area occurs less than 4,000 feet from the BCD Alternative, and 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 is still required to minimize the impact.

The second nest area occurs approximately 4,000 feet from the BCD Alternative, but there is not direct line-of-site between the nest area and the project. Impacts to this eagle pair would be adverse and less than significant (Class III) because of the distance between the nest area and the project is approximately 4,000 feet and because there would not be direct line-of-site. No mitigation would be required for this nest site for the BCD Alternative.

Impacts and the associated mitigation-related 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 BCD Alternative would cross within 4,000 feet USDA Forest Service modeled habitat for bald eagle (USDA, 2007) near MP BCD-16.5.

Bald eagles are also known to winter near Morena Reservoir, which is approximately 6 miles to the southwest, and Corte Madera Lake, which is approximately 5 miles to the west (Appendix 8c). At its closest point (at BCD-19.6), the BCD Alternative is approximately 1.5 miles away from reported bald eagle sightings (USDA, 2007). There is a low potential that bald eagles would use the habitat along this alternative for foraging during the winter.

The bald eagle is not known to and is not expected to nest within or adjacent to the BCD Alternative (Bittner, 2007). The species is not known to nest at Morena Reservoir or Corte Madera Lake (Bittner, 2007). No impacts to bald eagle as a result of the BCD 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 QCB were not conducted in 2007 for the BCD 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; therefore a precise impact determination cannot be adequately made.

Recent QCB observations (1998 and 2000) were made near Jacumba, approximately 3 miles southeast of MP BCD-0 of the BCD Alternative (USFWS, 2006). A historic QCB observation (1972) was made near Pine Valley approximately 4 miles northwest of MP BCD-19.6 (USFWS, 2006). The BCD Alternative would not cross QCB critical habitat; the nearest critical habitat is approximately 0.6 miles to the southeast.

The BCD Alternative, from approximately MP BCD-0 to MP BCD-2, occurs within USFWS protocol Survey Area 1. The remaining portion of the BCD Alternative is within USFWS protocol Survey Area 2, from approximately MP BCD-2 to MP BCD-19.6. Survey Areas 1 and 2 are areas 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.

With the lack of definitive survey data, the BCD 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 are 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)*

Suitable habitat was present at MP BCD-13.5 (La Posta Creek) and BCD-18.8 (Horse Canyon). Arroyo toad surveys at these sites 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 toad is assumed to be present at BCD-10.7 and BCD 18.8 and all habitat within 1 km of each of these sites 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 BCD Alternative where the arroyo toad is assumed to occur include 5.8 acres of temporary impacts to upland burrowing habitat and 11.0 acres of permanent impacts to upland burrowing 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 BCD Alternative (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 BCD Alternative, the required mitigation for arroyo toad occupied habitat includes 5.8 acres of on-site restoration and 27.8 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 BCD Alternative.

*Impact B-70: Direct or indirect loss of barefoot banded gecko or direct loss of habitat (Class I)*

This State-listed threatened species is known only from five localities in eastern San Diego County and western Imperial County. The natural history of this gecko is not well known; it is secretive and nocturnal and hides by day in deep crevices. It is active in fairly cool ambient temperatures during periods of increased humidity, typically spring through fall. It hibernates through the winter (CaliforniaHerps.com, 2007).

No surveys were conducted for this species. If surveys were conducted, and the species was not found, the survey result would have to be considered false negative because of the species' highly elusive nature. The barefoot banded gecko is, therefore, assumed to be present along the BCD Alternative from approximately MP BCD-0 through MP BCD-8. Any impact to the barefoot banded gecko or its habitat 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) and not mitigable to less than significant levels (Class I) extent of the impacts that would occur is unknown. Implementation of Mitigation Measures B-1a (that requires all construction to remain within delineated construction limits) and B-1c (conduct biological monitoring) would provide some protection for this species but is not adequate to mitigate impacts to less than significant levels.

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

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

**B-1c**      **Conduct biological monitoring.**

*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 BCD 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 BCD Alternative include washes and streams, the majority of which are dry at most times and unlikely to support fish populations. The majority of these watercourses would be spanned by the transmission lines, and impacts would occur in accordance with BIO-APM-5 that limits impacts to watercourses through project design. Therefore, the BCD 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 BCD 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.

As mentioned in Impact B-7B above, the BCD Alternative is not expected to impact PBS traditional movement routes.

*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 BCD Alternative would not present an electrocution risk to birds.

Mortality as a result of collision with BCD 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 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.

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 signifi-

cant 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.** There is no highly utilized avian flight path along this alternative; therefore, no marking of the overhead lines is required. All other mitigation that is required in Mitigation Measure B-10a, not related to the installation of markers, shall be implemented.

*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 is required.

*Impact B-12: Maintenance activities would result in disturbance to wildlife and could result in wildlife mortality (Class I for Peninsular bighorn sheep; Class II for other special-status wildlife and nesting birds; Class III for barefoot banded gecko and 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; mortality of special status species from grading, vegetation clearing, or use of access roads; and/or adverse effects to Peninsular bighorn sheep from maintenance activities that cause sheep to avoid affected areas.

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.d. (disturbance of critical habitat), 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), 1.h. (violation of the Bald Eagle Protection Act), and 2.b. (substantial adverse effect on riparian or other sensitive vegetation communities if weed species are introduced). 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.

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

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 if the noise threshold (i.e., 60 dB[A] Leq hourly) is met or exceeded at the edge of its nesting territories during its breeding season. 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.

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

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

- B-3a**      **Prepare and implement a Weed Control Plan.**
- B-7c**      **Minimize impacts to Peninsular bighorn sheep and provide compensation for loss of critical habitat.**
- 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.2.2.3 BCD South Option

#### Environmental Setting

The BCD South Option is in the Colorado Desert and South Coast bioregions and would only be used in combination with the BCD Alternative, diverging south at MP BCD-13.7. The option is 5.4 miles long and would connect with the Modified Route D Alternative at MP MRD-3.2.

**Vegetation Communities.** The predominant vegetation community along this option is chaparral. Other vegetation communities in this option include sage scrub, grasslands, oak woodlands, riparian forest, non-vegetated channel, and agriculture. Vegetation communities are described in Section D.2.1.2.2. Detailed vegetation mapping for the BCD South 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 this option route are often jurisdictional: non-vegetated channel and southern cottonwood-willow 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 additional listed or special status plant species beyond those listed in Section E.2.2 for the BCD Alternative are expected to occur in the BCD South Option.

**Special Status Wildlife Species.** No additional listed or special status wildlife species beyond those listed in Section E.2.2 for the BCD Alternative are expected to occur in the BCD South Option.

## Environmental Impacts and Mitigation Measures

This section presents a discussion of impacts and mitigation measures for the BCD South 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 BCD Alternative. For these impacts, the mitigation measures presented for the BCD Alternative would also be required for this option. Discussion of each of these impacts is presented in the BCD Alternative impact analysis in Section E.2.2.

- 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 and the BCD Alternative 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)*

Construction of the BCD South 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.2.2-3). Vegetation communities listed in Table E.2.2-3 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-17, BIO-APM-20, BIO-APM-23, and BIO-APM-25. Even with implementation of the APMs, however, 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 it is unknown if enough adequate mitigation land is 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).** As noted in Section E.2.2.1 for the BCD Alternative, impacts to RCAs are not allowed on NFS lands, in accordance with the Forest Plan (USDA, 2005). The BCD South Option would impact RCAs (0.6 acres of permanent impacts and 1.2 acre of temporary impacts) through the construction of access roads, pull sites, staging areas. Impacts to RCAs would be 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.2.2-3. Impacts to Vegetation Communities and Required Mitigation – BCD South Option

Vegetation Communities	Permanent Impacts			Temporary Impacts				Total Offsite Mitigation
	Impact	Ratio	Offsite Mitigation	Impact	Ratio	Onsite Restoration	Offsite Mitigation	
<b>Non-Native Vegetation, Developed Areas, and Disturbed Habitat</b>								
Developed	0.01	0	0.00	0.00	0	0.00	0.00	0.00
Disturbed habitat	4.39	0	0.00	0.04	0	0.00	0.00	0.00
Extensive agriculture	0.56	0	0.00	2.06	0	0.00	0.00	0.00
<b>Subtotal</b>	<b>4.96</b>	<b>--</b>	<b>0.00</b>	<b>2.10</b>	<b>--</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Grasslands and Meadows</b>								
Non-native grassland	0.18	1:1	0.18	0.23	1:1	0.23	0.00	0.18
<b>Subtotal</b>	<b>0.18</b>	<b>--</b>	<b>0.18</b>	<b>0.23</b>	<b>--</b>	<b>0.23</b>	<b>0.00</b>	<b>0.18</b>
<b>Coastal and Montane Scrub Habitats</b>								
Big sagebrush scrub	0.48	1.5:1	0.72	0.66	1:1	0.66	0.00	0.72
<b>Subtotal</b>	<b>0.48</b>	<b>--</b>	<b>0.72</b>	<b>0.66</b>	<b>--</b>	<b>0.66</b>	<b>0.00</b>	<b>0.72</b>
<b>Chaparrals</b>								
Chamise chaparral	0.34	1:1	0.34	0.10	1:1	0.10	0.00	0.34
Northern mixed chaparral	11.90	1:1	11.90	10.35	1:1	10.35	0.00	11.90
Northern mixed chaparral (disturbed)	0.09	1:1	0.09	0.00	1:1	0.00	0.00	0.09
Southern mixed chaparral	0.25	1:1	0.25	0.06	1:1	0.06	0.00	0.25
<b>Subtotal</b>	<b>12.58</b>	<b>--</b>	<b>12.58</b>	<b>10.51</b>	<b>--</b>	<b>10.51</b>	<b>0.00</b>	<b>12.58</b>
<b>Woodlands and Forests</b>								
Coast live oak woodland	0.22	3:1	0.66	0.11	3:1	0.11	0.22	0.88
<b>Subtotal</b>	<b>0.22</b>	<b>--</b>	<b>0.66</b>	<b>0.11</b>	<b>--</b>	<b>0.11</b>	<b>0.22</b>	<b>0.88</b>
<b>Herbaceous Wetlands, Freshwater, and Streams</b>								
Non-vegetated channel	0.05	1:1	0.05	0.09	1:1	0.09	0.00	0.05
<b>Subtotal</b>	<b>0.05</b>	<b>--</b>	<b>0.05</b>	<b>0.09</b>	<b>--</b>	<b>0.09</b>	<b>0.00</b>	<b>0.05</b>
<b>Riparian Forests and Woodlands</b>								
Southern cottonwood-willow riparian forest	0.17	3:1	0.51	0.69	2:1	0.69	0.69	1.20
<b>Subtotal</b>	<b>0.17</b>	<b>--</b>	<b>0.51</b>	<b>0.69</b>	<b>--</b>	<b>0.69</b>	<b>0.69</b>	<b>1.20</b>
<b>GRAND TOTAL</b>	<b>18.64</b>	<b>--</b>	<b>14.70</b>	<b>14.39</b>	<b>--</b>	<b>12.29</b>	<b>0.91</b>	<b>15.61</b>

**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 woodland and forest communities present along the route (see Table E.2.2-3) 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 BCD Alternative (Section E.2.2.1).

**Type Conversion.** As discussed in Section E.2.2.1 for the BCD 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 BCD South Option are the same as that described in Impact B-1 for the BCD Alternative (Section E.2.2.1).

*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 BCD South Option are provided in Table E.2.2-3.

**B-1c** Conduct biological monitoring.

*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 for this option in 2007 because the option was not finalized during the rare plant survey period.

No additional listed or special status plant species beyond those listed in Section E.2.2.1 for the BCD Alternative are expected to occur in the BCD South Option. Additionally, this 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 statuses.

The following APMs, as set forth in Table D.2-5, would be implemented for this option to address potential 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, 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 impacts to sensitive species; Other impact classes depend on species; see individual discussions)***

The BCD South Option would impact golden eagle (Impact B-7H), QCB (Impact B-7J), and arroyo toad (Impact B-7K). The BCD South Option could impact least Bell's vireo (Impact B-7D), southwestern willow flycatcher (Impact B-7E), and bald eagle (Impact B-7I). The BCD South Option would not impact the following listed or highly sensitive wildlife species: FTHL, PBS, burrowing owl, least Bell's vireo, southwestern willow flycatcher, desert pupfish, desert tortoise, golden eagle, bald eagle, QCB, arroyo toad, Stephens' kangaroo rat, coastal California gnatcatcher, San Diego and/or Riverside fairy shrimp, and barefoot banded gecko. Therefore, Impacts B-7A, B-7B, B-7C, B-7F, B-7G, B-7L, B-7M, and B-7N are not discussed.

No additional listed or special status wildlife species beyond those listed in Section E.2.2.1 for the BCD Alternative are expected to occur in the BCD South Option. Table E.1.2-2 contains specific information about the special status wildlife species and their listing or sensitivity statuses.

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 BCD South 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). 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.

Most of the non-listed special status species' habitats are sensitive vegetation communities (Table E.2.2-3); 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)***

Focused surveys for the least Bell's vireo were conducted at MP BCDS-3.5 (La Posta Creek) as part of the Interstate 8 Alternative (see Impact B-7D in Section E.1.2.2). The results of the surveys were negative.



Construction of the BCD South Option would result in impacts to riparian vegetation with the potential to support least Bell's vireo should the species breed near the survey location listed above at a later date. 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.

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.

*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 BCDS-3.5 (La Posta Creek) as part of the Interstate 8 Alternative (see Impact B-7D in Section E.1.2.2). The results of the surveys were negative.

Construction of the BCD South Option would result in impacts to riparian vegetation with the potential to support southwestern willow flycatcher should the species breed near the survey location listed above at a later date. 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 southwestern willow flycatcher 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.

Additionally, 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 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)*

One golden eagle nest area would be affected by the BCD South 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 2,000 feet from the BCD South Option and there is direct line-of-site between this nest area and the BCD South Option. 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 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 BCD South Option would cross USDA Forest Service modeled habitat (USDA, 2007) for bald eagle along La Posta Creek between MP BCDS-2.0 and BCDS-3.6 (Appendix 8c). At its closest point (at MP BCDS-3.5), the BCD South Option is approximately 6 miles away from reported bald eagle sightings (USDA, 2007), which are winter records from Morena Reservoir (Appendix 8c). There is a low potential that bald eagles would use the habitat along La Posta Creek for foraging during the winter.

The bald eagle is not known to and is not expected to nest within or adjacent to the BCD South Option (Bittner, 2007). The species is not known to nest at Morena Reservoir anywhere else in the vicinity of this option (Bittner, 2007). No impacts to bald eagle as a result of the BCD South 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)*

Although the BCD South was finalized after the 2007 QCB survey season, protocol surveys for the QCB would not have been conducted in 2007 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 option; therefore a precise impact determination cannot be adequately made.

Recent QCB observations (2004 and 2005) were made approximately 2.5 miles to the southwest and 2.5 miles to the southeast (respectively) of the BCD South Option (USFWS, 2006). The Campo North Option would not cross QCB critical habitat; the nearest critical habitat is approximately 11 miles to the southeast.

The entire BCD South Option is within USFWS protocol Survey Area 2, an area in which protocol surveys are required in suitable QCB habitat. While it is unlikely that this 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 Campo North 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). 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). However, Mitigation Measures B-1a, B-1c, B-2a, and B-7i are required to, at least in part, minimize impacts to the QCB.

*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 BCDS-3.5 (La Posta Creek) as part of the Interstate 8 Alternative (see Impact B-7K in Section E.1.2.2). The survey at BCDS-3.5 was conducted by listening for calling arroyo toads from a public road because ROE permission was not granted. Auditory only surveys are not conclusive enough to show arroyo toads are absent from a site. As assumed for the Interstate 8 Alternative, the species is assumed to be present at BCDS-3.5 and all habitat within 1 km of this site is assumed to be occupied, in accordance with USFWS (1999).

Suitable habitat was present approximately 500 feet to the east of MP BCDS-0.0 in La Posta Creek (Appendix 8J, Figure Ap.8J-27). As indicated in Section E.2.2 for the BCD Alternative, the arroyo toad is assumed to be present at this location because surveys could not be conducted in 2007 because of a lack of surface water. All habitat within 1 km of this site is assumed to be occupied by the species, in accordance with USFWS (1999).

Permanent impacts to arroyo toads and their breeding habitat include one tower (BCDS015) and an access road that would be constructed across La Posta Creek; temporary impacts to breeding habitat includes a pull site at MP BCDS-3.5 (Appendix 8J, Figure Ap.8J-27). 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) where the toad is assumed to occur include: 0.2 acres of permanent impacts to riparian breeding habitat and 0.7 acres of temporary impacts to riparian breeding habitat, as well as 7.4 acres of permanent impact to upland burrowing habitat and 7.0 acres of temporary disturbance to upland burrowing habitat. The pre-construction survey required in Mitigation Measure B-7j would conclusively define if there would be impacts to the arroyo toad in the areas of assumed toad presence from construction (i.e., if appropriate climatic conditions are present to encounter arroyo toads). The requirements in Mitigation Measure B-7j may be reduced based on the

results of this survey. 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.

Impacts to arroyo toad or its occupied breeding or burrowing habitat 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.

*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. The required mitigation for arroyo toad occupied habitat includes 7.7 acres of on-site restoration and 30.8 acres of off-site acquisition and preservation of occupied toad habitat consisting of 2.0 acre of breeding habitat and 28.8 acres of 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 BCD South 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-listed sensitive species or daytime migration)*

The types of potential impacts related to collision are the same as those described in Impact B-10 for the BCD Alternative (Section E.2.2.1). It is anticipated that the BCD South Option would not present an electrocution risk to birds. 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. The impact significance (Class I for listed species and Class II for non-sensitive species) and required mitigation associated with vegetation management (Mitigation Measure B-10a) for this option is the same as that described in Impact B-10 for the BCD Alternative (Section E.2.2.1).

*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. There is no highly utilized avian flight path along this option; therefore, no marking of the overhead lines is required. All other mitigation that is required in Mitigation Measure B-10a for the Proposed Project (Section D.2.14), not related to the installation of markers, shall be implemented.

*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 (substantial adverse effect through any impact to one or more individuals of a federal or State 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), 1.h. (violation of the Bald Eagle Protection Act), and 2.b. (substantial adverse effect on riparian or other sensitive vegetation communities if weed species are introduced). 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-3a**      **Prepare and implement a Weed Control Plan.**
- 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.**