

10. Alternative 6: (Maximum Helicopter Construction in the ANF): Impacts and Mitigation Measures

This section describes impacts of Alternative 6 (Maximum Helicopter Construction in the ANF) on biological resources, as determined by the significance criteria listed in Section 4.1. Mitigation measures are introduced where necessary in order to reduce significant impacts to less-than-significant levels. Alternative 6 was requested by the FS to reduce ground disturbance associated with new road construction and improvements to existing access roads on the ANF. As described in Section 2.7, this alternative would utilize helicopter construction within the ANF to the maximum extent feasible along Segments 6 and 11.

10.1 Direct and Indirect Effects Analysis

The significance criteria used to identify impacts to Biological Resources are introduced in Section 4.1 (Criteria for Determining Impact Significance). Impacts associated with this alternative are presented below under the applicable significance criterion.

Impacts to Riparian or Natural Communities (Criterion BIO1)

Construction activities associated with Alternative 6 described above and in Section 1.2.6 would result in a net decrease in size and magnitude of construction impacts to biological resources identified under the proposed Project. The impacts and their associated mitigation measures that fall under Criterion BIO1 are summarized in the following paragraphs.

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

Alternative 6 is identical to the proposed Project in the Northern and Southern Regions. In the Central Region, on NFS lands, this alternative differs from the proposed Project by an approximate 42.5-mile reduction in the amount of access/spur roads that would be improved or created under the proposed Project. Alternative 6 follows the same route as the proposed Project through the ANF, impacting similar habitats, but comprising a net decrease in the size and magnitude of direct and indirect impacts as a result of the reduction in permanent impacts associated with this alternative. One additional habitat type, Yellow Pine Forest (Plantation), would be impacted by implementation of this alternative. Construction may also result in the creation of conditions that are favorable for the invasion of weedy exotic species that prevent the establishment of desirable vegetation (See Impact B-3 below).

Overall, as described in Section 2.6.2.2 (Land Disturbance) of the EIR/EIS, the type and general location of land disturbance associated with Alternative 6 is expected to be comparable to SCE's proposed Project, although there would be a noticeable reduction in permanent land disturbance as a result of the 42.5-mile reduction in new spur roads/upgrades to existing roads and land disturbance associated with ground-based construction. For SCE's proposed Project (Alternative 2), construction within Segment 6 on the ANF would result in approximately 2.5 acres of temporary disturbance ($\pm 15\%$ range of 2.1-2.9 acres) and approximately 52.1 acres of permanent disturbance ($\pm 15\%$ range of 44.3-59.9 acres) associated with new and/or upgraded roads. Segment 11 within the ANF would result in no acres of temporary and

approximately 39.3 acres of permanent disturbance ($\pm 15\%$ range of 33.4-45.2 acres) associated with new and/or upgraded roads.

Alternative 6 would reduce the amount of new and/or upgraded roads by approximately 42.5 miles within the ANF, which would otherwise be required under SCE's proposed Project. Under Alternative 6, construction within Segment 6 would result in approximately 0.37 acres of temporary disturbance ($\pm 15\%$ range of 0.31-0.42 acres) and approximately 25.4 acres of permanent disturbance ($\pm 15\%$ range of 21.6-29.2 acres) associated with new and/or upgraded roads; Segment 11 within the ANF (NFS lands) would result in no acres of temporary and approximately 21.5 acres of permanent disturbance ($\pm 15\%$ range of 18.3-24.7 acres). Overall, within Segment 6 permanent land disturbance is expected to be reduced by approximately 26.6 acres (56.7 acres vs. 30.1); and in Segment 11 is expected to be reduced by approximately 19.3 acres (63.1 acres vs. 43.8 acres).

Implementation of Mitigation Measures B-1a (Provide restoration/compensation for impacts to native vegetation communities), B-1b (Implement a Worker Environmental Awareness Program), B-1c (Treat cut tree stumps with Sporax), H-1a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits), and AQ-1a (Implement Construction Fugitive Dust Control Plan) would reduce these impacts to less than significant (Class II). No further mitigation is required.

Impact B-2: The Project would result in the loss of desert wash or riparian habitat.

As Alternative 6 is identical to the proposed Project in the Northern Region, the amount of desert wash impacted by the alternative in this region is identical to the proposed Project. Similarly, the amount of riparian habitat impacted by this alternative in the Southern Region is also identical to the proposed Project.

Approximately 96 Riparian Conservation Areas (RCAs) occur where the transmission line crosses a stream or drainage. One hundred and seventy-one occur where access or spur roads cross ephemeral, intermittent, or perennial drainages under the proposed Project. While riparian areas are considered on both NFS lands and non-NFS lands, RCAs are defined only for the ANF as required by the ANF LRMP. Of the 267 RCAs that occur on NFS lands, 95 would be subject to impacts under the proposed Project that would be considered other than neutral or beneficial. These impacts would occur from road grading, tree removal, culvert installation, stream diversion or similar impacts. Other than neutral or beneficial effects to these resources is not consistent with FS guidelines and would require the completion of a Forest Plan Amendment.

The single largest impact to RCAs from the proposed Project and alternatives would occur from the widening of the access roads to 16 feet and the construction of new spur roads. Widening of the access roads in some cases would remove riparian vegetation, including mature oak trees, alders, and other riparian trees that occur in RCAs. Under Alternative 6, the number of RCAs that would occur where access or spur roads cross drainages would be reduced to 86, with 58 being subject to potentially adverse impacts. This would result in a difference of 37 fewer RCAs impacted under Alternative 6 as compared to the proposed Project.

Alternative 6 follows the same route as the proposed Project through the ANF, impacting similar habitats, but comprising a slight decrease in the size and magnitude of direct and indirect impacts to desert wash and riparian habitat (0.06 acre) as a result of the increased helicopter construction and related decrease in the amount of access road improvements. However, impacts to riparian habitat on the ANF, including RCAs, would still occur as a result of necessary access road improvements. Impacts to desert wash and

riparian habitat are described in Section 6.1. Implementation of Mitigation Measures B-1a (Provide restoration/compensation for impacts to native vegetation communities), B-1b (Implement a Worker Environmental Awareness Program), B-2 (Implement RCA Treatment Plan), H-1a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits), and AQ-1a (Implement Construction Fugitive Dust Control Plan) would reduce these impacts to less than significant (Class II). No further mitigation is required.

Impact B-3: The Project would result in the establishment and spread of noxious weeds.

Alternative 6 follows the same route as the proposed Project through the ANF, impacting similar habitats. There would be an approximate 42.5-mile decrease in the amount of access roads used, improved, and constructed under this alternative. This decrease in the construction/use of access/spur roads infers that 42.5 miles of road will not be further impacted by the spread of invasive plants due to construction activity. Spanish broom, a nonnative and invasive weed, was identified at helicopter Sites 9 and 10 that would be used under Alternative 6. Spanish broom was also identified at sites SCE 7 (the same site as Site 9 under Alternative 6) and SCE 5 that would be used under the proposed Project. The potential introduction or spread of noxious and invasive weeds would occur primarily during construction activities, but would also continue to occur during operation and maintenance phases. Similar to the proposed Project, the introduction of noxious and invasive weeds would be related to ground disturbance from clearing and grading, road maintenance, the use of vehicles, construction equipment, or earth materials contaminated with non-native plant seed, use of straw bales or wattles that contain seeds of non-native plant species, and enhanced public access to the project corridor during and after construction. Additionally, equipment or clothing is often contaminated with weed seeds and seeds can be spread by construction or maintenance personnel. Implementation of Alternative 6 would provide many avenues for new propagules (any part of a plant that may generate a new individual plant) to spread into previously isolated areas. However, implementation of Mitigation Measures B-1a (Provide restoration/compensation for impacts to native vegetation communities), B-2 (Implement RCA Treatment Plan), B-3a (Prepare and implement a Weed Control Plan), B-3b (Remove weed seed sources from construction routes), and B-3c (Remove weed seed sources from assembly yards, staging areas, tower pads, pull sites, landing zones, and spur roads) would reduce impacts to less than significant (Class II). No further mitigation is required.

Impact B-4: Construction activities, including the use of access roads and helicopter construction, would result in disturbance to wildlife and may result in wildlife mortality.

Alternative 6 follows the same route as the proposed Project through the ANF, impacting identical wildlife species, but comprising a net decrease in the size and magnitude of direct and indirect impacts as a result of the reduction in the amount of access roads created or improved, especially in undisturbed portions of the ANF. With the increase in helicopter construction, access road use and improvement would decrease over the proposed Project, but disturbance related to helicopter use, including construction of helicopter staging sites, noise, dust, and vibration, would increase. For example, under the proposed Project approximately 6,633 to 9,339 heavy helicopter trips would occur during construction while approximately 27,423 to 38,335 trips would occur under Alternative 6. As described in Section 6.1, direct impacts to wildlife, including special-status species, associated with construction of Alternative 6 would include mortality from trampling or crushing; increased noise levels due to heavy equipment and helicopter use; increased vehicular and human presence along existing access roads and riparian areas; displacement due to habitat modifications, including vegetation removal, alterations of existing soil conditions; fugitive dust; and increased erosion and sediment transport. Indirect effects to wildlife as a

result of Alternative 6 include the introduction of non-native, invasive plant species, alterations to existing hydrological conditions, and exposure to contaminants. Additionally, animals may be displaced due to helicopter activities, and the habitat they move into may not support adequate forage or may result in increased competition for resources. Animals that are relocating may have less time to spend mating, foraging, rearing young, etc., and could be at an increased risk for predation. These factors could decrease fitness and survival for displaced animals. However, the implementation of Mitigation Measures B-1a (Provide restoration/compensation for impacts to native vegetation communities), B-1b (Implement a Worker Environmental Awareness Program), B-2 (Implement RCA Treatment Plan), B-3a (Prepare and implement a Weed Control Plan), H-1a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits), and AQ-1a (Implement Construction Fugitive Dust Control Plan) would reduce these impacts to less than significant (Class II). No further mitigation is required.

Impact B-5: Construction activities conducted during the breeding season would result in the loss of nesting birds or raptors.

Alternative 6 follows the same route as the proposed Project through the ANF, impacting identical avian species, but comprising a net decrease in the size and magnitude of direct and indirect impacts as a result of decreased ground-disturbing activity, including an approximate 42.5-mile reduction in access road improvement and creation. However, noise from increased helicopter operation could adversely impact nesting birds to a greater degree than the proposed Project. For example, under the proposed Project approximately 6,633 to 9,339 heavy helicopter trips would occur during construction while approximately 27,423 to 38,335 trips would occur under Alternative 6. The increased use of helicopters for implementation of Alternative 6 would also increase noise, vibration, dust, and air turbulence, and would cause visual disturbance to nesting birds above the levels anticipated for the proposed Project. These factors could result in the disruption of breeding activity, and subsequent nest failure. However, the implementation of Mitigation Measures B-1a (Provide restoration/compensation for impacts to native vegetation communities), B-1b (Implement a Worker Environmental Awareness Program), B-3a (Prepare and implement a Weed Control Plan), B-5 (Conduct pre-construction surveys and monitoring for breeding birds), and AQ-1a (Implement Construction Fugitive Dust Control Plan) would reduce impacts to less than significant (Class II). No further mitigation is required.

Impact B-6: The Project would cause the loss of foraging habitat for wildlife.

Alternative 6 follows the same route as the proposed Project through the ANF, impacting similar habitat for wildlife species (including special-status species) with the addition of Yellow Pine Forest, but comprising a net decrease in the size and magnitude of direct and indirect impacts as a result of decreased ground-disturbing activity, including an approximate 42.5-mile reduction in access road improvement and creation. Direct impacts as a result of construction activities associated with Alternative 6 would include the permanent removal and temporary disturbance of common and rare vegetation communities utilized as foraging habitat for wildlife, fugitive dust, and increased noise levels due to heavy equipment and helicopter operations occurring in these areas. These impacts would primarily occur during tower pad preparation; grading for helicopter staging areas; and construction, grading, and widening of new spur roads or existing access roads that would still be needed under this alternative. Indirect impacts to foraging habitat could include alterations to existing topographical and hydrological conditions, increased erosion and sediment transport, and the establishment of noxious weeds. Implementation of Mitigation Measure B-1a (Provide restoration/compensation for impacts to native vegetation communities), Mitigation Measure B-1b (Implement a Worker Environmental Awareness Program), Mitigation Measure

B-2 (Implement RCA Treatment Plan), Mitigation Measure B-3a (Prepare and implement a Weed Control Plan), Mitigation Measure AQ-1a (Implement Construction Fugitive Dust Control Plan), and Mitigation Measure H-1a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits) would reduce impacts to less than significant (Class II). No further mitigation is required.

Impacts to Endangered or Threatened Species, or Proposed or Critical Habitat (Criterion BIO2)

Impact B-7: The Project could disturb endangered, threatened, or proposed plant species or their habitat.

Alternative 6 follows the same route as the proposed Project through the ANF, impacting similar habitat types, but comprising a net decrease in the size and magnitude of direct and indirect impacts as a result of the reduction in new and improved access and spur roads. Overall, within Segment 6 permanent land disturbance is expected to be reduced by approximately 27.3 acres (53.5 acres vs. 26.2); and in Segment 11 is expected to be reduced by approximately 19.2 acres (40.9 acres vs. 21.7 acres). Mt. Gleason Indian Paintbrush, a State Rare and FS Sensitive species, was identified adjacent to helicopter Site 4. As described in Section 6.1, direct impacts to listed plant species could occur from construction activities that remove vegetation, grade soils, or cause sedimentation, including tower pad preparation, clearing helicopter staging areas, and the construction, grading, and widening of new spur roads and existing access roads that would still be required under this alternative. Indirect impacts could include the disruption of native seed banks through soil alterations, the accumulation of fugitive dust, increased erosion and sediment transport, and the colonization of non-native, invasive plant species. However, the implementation of Mitigation Measures AQ-1a (Implement Construction Fugitive Dust Control Plan), B-1a (Provide restoration/compensation for impacts to native vegetation communities), B-1b (Implement a Worker Environmental Awareness Program), B-3a (Prepare and implement a Weed Control Plan), H-1a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits), and B-7 (Conduct preconstruction surveys for State and federally Threatened, Endangered, Proposed, Petitioned, and Candidate plants and avoid any located occurrences of listed plants) would reduce impacts to endangered, threatened, and proposed plant species to less-than-significant levels (Class II). No further mitigation is required.

Impact B-8: The Project could result in the loss of California red-legged frogs and Mountain yellow-legged frogs.

Alternative 6 follows the same route as the proposed Project through the ANF. However, this alternative would comprise a net decrease in the size and magnitude of direct and indirect impacts as a result of decreased ground-disturbing activity, including an approximate 42.5-mile reduction in the amount of access roads created or improved. However, access roads to stringing and pulling sites would still be improved or constructed under this alternative. As discussed above in Section 6.1, the use of wet ford crossings along access roads could increase turbidity and sedimentation at, and downstream of, the crossing. California red-legged frogs may use minor tributaries that would be crossed by construction vehicles, especially as refugia when major waterways are experiencing high rates of flow and when water is present in the tributaries. As described for the proposed Project, direct impacts to the California red-legged frog and mountain yellow-legged frog, if present, could occur from construction activities as a result of mechanical crushing, loss of breeding or basking sites, fugitive dust, and human trampling. Disturbance would be associated with the removal of vegetation and alterations of existing topographical

and hydrological conditions, particularly along drainage crossings and within RCAs. Indirect impacts to these species could include the degradation of water quality, changes in water runoff due to spur road and access road construction or upgrades, increased erosion and sediment transport, and the spread of noxious weeds along riparian areas. However, it is important to note that construction activities in some areas that could potentially support these species, such as the upgrades to the crossing at upper Big Tujunga Creek, use of West Fork Cogswell Road, and use of the road along upper Big Tujunga Creek near Shortcut Station would not occur under this alternative, and would reduce potential impacts when compared to the proposed Project. The implementation of APMs BIO-1 through BIO-7 and Mitigation Measure B-1a (Provide restoration/compensation for impacts to native vegetation communities), Mitigation Measure B-1b (Implement a Worker Environmental Awareness Program), Mitigation Measure B-2 (Implement RCA Treatment Plan), Mitigation Measure B-3a (Prepare and implement a Weed Control Plan), Mitigation Measure AQ-1a (Implement Construction Fugitive Dust Control Plan), Mitigation Measure H-1a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits), Mitigation Measure H-1b (Dry weather construction), Mitigation Measure B-8a (Conduct protocol surveys for California red-legged frogs and implement avoidance measures), and Mitigation Measure B-8b (Conduct biological monitoring) would reduce potential impacts to these species a less-than-significant level (Class II). No further mitigation is required.

Impact B-9: The Project would result in the loss of arroyo toads.

Alternative 6 follows the same route as the proposed Project through the ANF. However, this alternative would comprise a net decrease in the size and magnitude of direct and indirect impacts as a result of decreased ground-disturbing activity, including an approximate 42.5-mile reduction in the improvement and construction of access roads. Improvement of some access roads in areas supporting or potentially supporting the arroyo toad, including 3N23 (Monte Cristo Creek), 4N18.2 (Lynx Gulch), and 3N27 (Edison/Fall Creek) would not occur under this alternative but vehicles such as pick-up trucks may still use these roads for access. However, not improving these roads would greatly decrease potential effects to toads in these areas. Noise and disturbance associated with helicopter use can disturb arroyo toads and interfere with breeding. As described for the proposed Project, direct impacts to arroyo toads could occur as a result of crushing from mechanized equipment, temporary disruption of foraging or thermoregulation sites in adjacent upland areas, fugitive dust, or the disruption of egg masses from impacts to water quality. Indirect effects to this species may be caused by the diversion or modification of water flows, increased downstream sediment transport, or the establishment of noxious weeds. However, implementation of APMs BIO-1 through BIO-7 and Mitigation Measure B-1a (Provide restoration/compensation for impacts to native vegetation communities), Mitigation Measure B-1b (Implement a Worker Environmental Awareness Program), Mitigation Measure B-2 (Implement RCA Treatment Plan), Mitigation Measure B-3a (Prepare and implement a Weed Control Plan), Mitigation Measure H-1a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits), Mitigation Measure H-1b (Dry weather construction), Mitigation Measure AQ-1a (Implement Construction Fugitive Dust Control Plan), Mitigation Measure B-9 (Conduct protocol surveys for arroyo toads and implement avoidance measures in occupied areas), and Mitigation Measure B-8b (Conduct biological monitoring) would avoid or mitigate take, including loss of habitat, thereby reducing potential impacts to a less-than-significant level (Class II). No further mitigation is required.

Impact B-10: The Project could result in the loss of desert tortoises.

Alternative 6 is identical to the proposed Project in the Northern Region, where the desert tortoise has the potential to occur. Any added impacts associated with Alternative 6 would not affect suitable habitat for desert tortoises, as suitable habitat is absent for this species within the additional areas affected by this alternative. Therefore, impacts to desert tortoises would be identical to those described for the proposed Project (Section 6.1). Implementation of Mitigation Measures B-1a (Provide restoration/compensation for impacts to native vegetation communities), B-1b (Implement a Worker Environmental Awareness Program), B-3a (Prepare and implement a Weed Control Plan), B-10 (Conduct presence or absence surveys for desert tortoise and implement avoidance measures), and AQ-1a (Implement Construction Fugitive Dust Control Plan) would reduce potential impacts to a less-than-significant level (Class II). No further mitigation is required.

Impact B-11: The Project could result in mortality of desert tortoises as a result of increased predation by common ravens.

Increases in nest sites for common raven as a result of tower construction would not change from the proposed Project under this alternative, as Alternative 6 is identical to the proposed Project in the Northern Region. Populations of common raven and their predation pressure on the desert tortoise are not expected to result from additional towers, and impacts are expected to be less than significant. Alternative 6 differs from the proposed Project only on the ANF where suitable habitat for the desert tortoise is absent. Therefore, impacts to this species are identical to those described for the proposed Project (Section 6.1) and would be less than significant (Class III). No further mitigation is required.

Impact B-12: The Project could result in the loss of special-status fish.

Alternative 6 would occur in the exact same alignment as Alternative 2. The primary difference in this alternative is the reduction of road use on the ANF from road grading and the development of spur roads. In addition, use of the West Fork Cogswell road, which is located adjacent to the West Fork of the San Gabriel River, would not occur. The West Fork of the San Gabriel River in this area supports Santa Ana sucker, arroyo chub, and Santa Ana speckled dace, as well as critical habitat for the Santa Ana sucker. Alternative 6 would result in a reduction in the amount of heavy road traffic and grading required on many of the Forest System roads. This includes major road grading and upgrades within RCAs and perennial water bodies such as Big Tujunga Creek and portions of the West Fork of the San Gabriel River. Under Alternative 6 the number of stream crossings is reduced from 171 to 86. As described for Alternative 2, road grading will occur in RCAs associated with the San Gabriel River above Cogswell reservoir. However, the elimination of the West Fork Cogswell road will result in a net decrease in the size and magnitude of direct and indirect impacts to special-status fish species.

Project-generated runoff would not result in impacts to special-status fish due to the fact that Santa Ana sucker are below the Big Tujunga Reservoir and the Cogswell Reservoir and sedimentation would settle out in the reservoirs and would not impact special-status fish species. Therefore, under Alternative 6 there would be a decrease in potential impacts to Santa Ana Sucker, arroyo chub, and Santa Ana speckled dace since the West Fork Cogswell Road would not be used. Implementation of Mitigation Measure B-1a (Provide restoration/compensation for impacts to native vegetation communities), Mitigation Measure B-1b (Implement a Worker Environmental Awareness Program), Mitigation Measure B-2 (Implement RCA Treatment Plan), Mitigation Measure B-3a (Prepare and implement a Weed Control Plan), Mitigation Measure H-1a (Implement an Erosion Control Plan and demonstrate compliance with water quality

permits), Mitigation Measure H-1b (Dry weather construction), Mitigation Measure B-8b (Conduct biological monitoring), and B-12 (Implement avoidance and minimization measures for Santa Ana sucker and other aquatic organisms) would reduce these impacts to less than significant levels (Class II). No further mitigation is required.

Impact B-13: The Project could result in the loss of Critical Habitat for the Santa Ana sucker.

Alternative 6 would occur in the exact same habitat and alignment as Alternative 2. The primary difference in this alternative is the reduction of road use on the ANF from road grading and the development of spur roads. In addition, use of the West Fork Cogswell road, which is located adjacent to critical habitat for the Santa Ana sucker, would not occur. Therefore Alternative 6 would avoid potential direct effects to critical habitat for this species and impacts would not occur.

Impact B-14: The Project could result in the loss of California condor.

Alternative 6 follows the same route as the proposed Project through the ANF, resulting in identical types of impacts to the California condor, but comprising a net increase in the size and magnitude of direct and indirect impacts as a result of additional helicopter operation and potential for leaking equipment. There would be a decrease in the amount of access roads improved and/or constructed under this alternative. Implementation of Mitigation Measure B-1a (Provide restoration/compensation for impacts to native vegetation communities), Mitigation Measure B-1b (Implement a Worker Environmental Awareness Program), Mitigation Measure B-2 (Implement RCA Treatment Plan), Mitigation Measure B-3a (Prepare and implement a Weed Control Plan), Mitigation Measure B-8b (Conduct biological monitoring), and Mitigation Measure B-14 (Monitor construction in condor habitat and remove trash and micro-trash from the work area daily) would reduce impacts to this species, including the loss of habitat and the potential for micro-trash ingestion, to less-than-significant levels (Class II). No further mitigation is required.

Electrocutions and/or line collisions as a result of Project implementation are discussed further under Impacts B-20 and B-21.

Impact B-15: The Project would disturb nesting southwestern willow flycatchers, least Bell's vireos, yellow-billed cuckoos, or their habitat.

Alternative 6 follows the same route as the proposed Project through the ANF but would result in decreased impacts to listed riparian birds as compared to the proposed Project as a result of the 42.5-mile reduction in the amount of access and spur road construction. The dense riparian habitat present on the West Fork Cogswell road would not be disturbed under this alternative. Additionally, some roads in areas supporting suitable habitat for listed riparian birds on the ANF, including 3N23 (Monte Cristo Creek), 2N23 (Shortcut Edison), West Fork Cogswell Road, and 3N27 (Edison/Fall Creek), would not be improved under Alternative 6 and therefore would decrease potential impacts to these species on the ANF. However, this alternative is identical to Alternative 2 in the Southern Region where least Bell's vireo are known to occur, and impacts to this species in this area would be the same as described for Alternative 2. Alternative 6 would comprise a net increase in the size and magnitude of direct and indirect impacts associated with additional helicopter operation immediately adjacent to riparian habitats, although these impacts would be considered short-term and temporary. Construction disturbance related to the remaining access roads, tower pad construction, staging areas, stringing and pulling areas, concrete batch plant locations, and helicopter staging areas located near riparian areas during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment, which would constitute take. However, implementation of Mitigation Measures B-1a (Provide

restoration/compensation for impacts to native vegetation communities), Mitigation Measure B-1b (Implement a Worker Environmental Awareness Program), Mitigation Measure B-2 (Implement RCA Treatment Plan), Mitigation Measure B-3a (Prepare and implement a Weed Control Plan), Mitigation Measure B-5 (Conduct pre-construction surveys and monitoring for breeding birds), Mitigation Measure B-15 (Conduct protocol or focused surveys for listed riparian birds and avoid occupied habitat), Mitigation Measure H-1a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits), and Mitigation Measure AQ-1a (Implement Construction Fugitive Dust Control Plan) would reduce impacts to these species to less-than-significant levels (Class II). No further mitigation is required.

Impact B-16: The Project would result in the loss of coastal California gnatcatchers.

Alternative 6 differs from the proposed Project on the ANF, where this Alternative would result in the maximum number of towers being constructed by helicopter. However, coastal California gnatcatchers are not known or expected to occur within the ANF due to a lack of suitable habitat. Impacts to this species in the Southern Region where it is known to occur would be identical to those described for the proposed Project. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment, which would constitute take. However, implementation of APMs BIO-4 through BIO-6 and Mitigation Measure B-1b (Implement a Worker Environmental Awareness Program), Mitigation Measure B-16 (Conduct focused surveys for coastal California gnatcatcher and implement avoidance measures), and Mitigation Measure AQ-1a (Implement Construction Fugitive Dust Control Plan) would reduce impacts to less-than-significant levels (Class II). No further mitigation is required.

Impact B-17: The Project would result in the loss of critical and/or occupied habitat of the coastal California gnatcatcher.

Alternative 6 follows the same route as the proposed Project through the ANF; however, critical and/or known occupied habitat does not exist within the ANF portion of Alternative 6. Therefore, impacts to this species are identical to those described for the proposed Project (Section 6.1) and implementation of APMs BIO-4 through BIO-8 and Mitigation Measure B-1a (Provide restoration/compensation for impacts to native vegetation communities), Mitigation Measure B-3a (Prepare and implement a Weed Control Plan), Mitigation Measures B-16 and B-17 (Conduct focused surveys for coastal California gnatcatcher and implement avoidance measures, Preserve off-site habitat and/or habitat restoration for the coastal California gnatcatcher), and Mitigation Measure AQ-1a (Implement Construction Fugitive Dust Control Plan) would reduce impacts to less-than-significant levels (Class II). No further mitigation is required.

Impact B-18: The Project could disturb nesting Swainson's Hawks.

Alternative 6 is identical to the proposed Project in the Northern Region, where the Swainson's hawk occurs. Any added impacts associated with Alternative 6 would not affect nesting Swainson's hawks, as suitable habitat is absent for this species within the additional areas affected by this alternative. Therefore, impacts to this species are identical to those described for the proposed Project (Section 6.1) and implementation of APMs BIO-4 through BIO-6 and Mitigation Measures B-1b (Implement a Worker Environmental Awareness Program), B-18a and B-18b (Conduct pre-construction surveys for Swainson's hawks, Removal of nest trees for Swainson's hawks), and AQ-1a (Implement Construction Fugitive Dust Control Plan) would reduce impacts to less-than-significant levels (Class II). No further mitigation is required.

Impact B-19: The Project would result in the loss of foraging habitat for Swainson's hawks.

Suitable habitat for the Swainson's hawk does not occur in the Central Region where Alternative 6 deviates from the proposed Project. In the Northern Region, where suitable habitat for this species occurs, this alternative is identical to the proposed Project. Therefore, impacts to this species are identical to those described for the proposed Project (Section 6.1) and implementation of Mitigation Measures B-1a (Provide restoration/compensation for impacts to native vegetation communities), B-3a (Prepare and implement a Weed Control Plan), B-18a (Conduct pre-construction surveys for Swainson's hawks), B-19 (Compensate for loss of foraging habitat for Swainson's hawks), and AQ-1a (Implement Construction Fugitive Dust Control Plan) would reduce impacts to less-than-significant levels (Class II). No further mitigation is required.

Impact B-20: The Project could result in electrocution of State and/or federally protected birds.

Alternative 6 differs from the proposed Project in the amount of construction that would be completed via helicopter on NFS lands. However, the towers and lines would be identical to the proposed Project and risk of electrocution of State and/or federally protected birds would be the same as described in Section 6.1. Therefore, implementation of APMs BIO-4 and BIO-9 would ensure impacts would be less than significant (Class III). No further mitigation is required.

Impact B-21: The Project could result in collision with overhead wires by State and/or federally protected birds.

As the characteristics of the towers and lines that would be constructed under Alternative 6 are identical to the proposed Project, the risk of collision with overhead wires by State and/or federally protected birds would be the same as described for the proposed Project (Section 6.1). Therefore, implementation of APM BIO-9 would ensure impacts would be less than significant (Class III). No further mitigation is required.

Impact B-22: The Project could result in disturbance to Mohave ground squirrels.

Alternative 6 differs from the proposed Project in the amount of construction that would be completed via helicopter on NFS lands. This alternative is identical to the proposed Project in the Northern Region, where the Mohave ground squirrel has the potential to occur. Any added impacts associated with Alternative 6 would not reduce suitable habitat for Mohave ground squirrels, as suitable habitat is not present for this species within the ANF portion of Alternative 6. Therefore, impacts to this species are identical to those described for the proposed Project (Section 6.1) and implementation of APMs BIO-4 through BIO-7 and Mitigation Measure AQ-1a (Implement Construction Fugitive Dust Control Plan), Mitigation Measure B-1a (Provide restoration/compensation for impacts to native vegetation communities), Mitigation Measure B-1b (Implement a Worker Environmental Awareness Program), Mitigation Measure B-3a (Prepare and implement a Weed Control Plan), and Mitigation Measures B-22a (Conduct focused surveys for Mohave ground squirrels), B-22b (Implement construction monitoring for Mohave ground squirrels), and B-22c (Preserve off-site habitat for the Mohave ground squirrel) would reduce impacts to less-than-significant levels (Class II). No further mitigation is required.

Have a substantial adverse effect on a candidate, Forest Service Sensitive, or special-status species (Criterion BIO3)

Impact B-23: The Project would result in loss of candidate, Forest Service Sensitive, or special-status plant species.

Alternative 6 follows the same route as the proposed Project through the ANF, impacting similar habitat, but comprising a net decrease in the size and magnitude of direct and indirect impacts as a result of a decrease in grading for new access and/or spur roads and improvements to existing access roads. In addition, the West Fork Cogswell road which runs adjacent to the West Fork of the San Gabriel River would not be used and the construction of the Big Tujunga River crossing would not occur. A total of 15 special-status plant occurrences would be avoided under Alternative 6 as a result of this reduction in the use and improvement of access roads. Surveys conducted in July, 2008 detected short-joint beaver tail cactus, a CNPS List 1B.2 and FS Sensitive species, at helicopter Sites 1 and 3. San Gabriel manzanita, also a CNPS List 1B.2 and FS Sensitive species, was detected in Sites 5 and 6 and adjacent to Site 9 (proposed Project site SCE 7). Suitable habitat for San Gabriel manzanita is also present at Site 4. Suitable habitat for Lemmon's syntrichopappus, a CNPS List 4.3 and FS Watch List species, is present in Sites 5 and 6. Plummer's mariposa lily (CNPS List 1B.2, FS Sensitive), is present adjacent to Site 6. An unidentified *Calochortus* sp., which could be a special-status species, was identified in Site 7 (proposed Project helicopter site 6B). Additional surveys conducted in May and June 2009 detected San Gabriel scrub oak at Site 11 and San Gabriel manzanita adjacent to Site 13. In total, 8 helicopter sites support special-status plants on or adjacent to the sites under Alternative 6, while 5 sites support special-status plants under Alternative 2. As described for the proposed Project, direct impacts to special-status plant species would be the same as described for listed plant species (Impact B-7) and may occur in a variety of ways, including the direct removal of plants during the course of construction. Clearing and grading associated with the placement of towers or the grading of access or spur roads may also result in the alteration of soil conditions, including the loss of native seed banks and changes to the topography and drainage of a site such that the capability of the habitat to support special-status species is impaired. Indirect impacts include the creation of conditions that are favorable for the invasion of weedy exotic species that prevent the establishment of desirable vegetation and may adversely affect wildlife. Additional indirect impacts include dust and sediment transport. As previously described for vegetation communities, soil disturbance may also result in the spread of invasive plant species. However, avoidance and implementation of Mitigation Measures AQ-1a (Implement Construction Fugitive Dust Control Plan), B-1a (Provide restoration/compensation for impacts to native vegetation communities), B-1b (Implement a Worker Environmental Awareness Program), B-3a (Prepare and implement a Weed Control Plan), H-1a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits), B-7 (Conduct preconstruction surveys for State and federally Threatened, Endangered, Proposed, Petitioned, and Candidate plants and avoid any located occurrences of listed plants), and B-23 (Preserve off-site habitat/management of existing populations of special-status plants) would reduce impacts to less than significant (Class II). No further mitigation is required.

Impact B-24: The Project could result in mortality or injury of, and loss of nesting habitat for, southwestern pond turtles.

Alternative 6 follows the same route as the proposed Project through the ANF with a 42.5-mile reduction in the construction/improvement of spur and access roads. In addition, the West Fork Cogswell road which runs adjacent to the West Fork of the San Gabriel River would not be used and the construction of

the Big Tujunga River crossing would not occur. This alternative would also restrict use of the Monte Cristo and Lynx Gulch roads and reduce potential effects to over 84 RCAs. By avoiding these major riparian areas, Alternative 6 would result in identical types of impacts to southwestern pond turtles, but comprise a net decrease in the size and magnitude of direct and indirect impacts as a result of the approximate 42.5-mile reduction in the improvement and construction of access roads and a decrease in impacts to riparian areas. However, as discussed above in Section 6.1, the use of wet ford crossings along access roads could increase turbidity and sedimentation at and downstream of the crossing. Direct effects to southwestern pond turtle may occur from construction activity as a result of mechanical crushing; loss of nesting, breeding or basking sites; and human trampling. Disturbance would be associated with the removal of vegetation, construction and widening of access and spur roads, excavation of footings, and tower construction adjacent to areas that support this species. Indirect impacts to southwestern pond turtle would include alteration of habitat that would preclude pond turtle use, degradation of water quality over time due to siltation and sedimentation, and the spread of noxious weeds. Implementation of APMs BIO-1 through BIO-3 and BIO-5 through BIO-7 and Mitigation Measure B-1a (Provide restoration/compensation for impacts to native vegetation communities), Mitigation Measure B-1b (Implement a Worker Environmental Awareness Program), Mitigation Measure B-3a (Prepare and implement a Weed Control Plan), B-12 (Implement avoidance and minimization measures for Santa Ana sucker and other aquatic organisms), Mitigation Measure B-24 (Conduct focused presence/absence surveys for southwestern pond turtle and implement monitoring, avoidance, and minimization measures), Mitigation Measure H-1a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits), Mitigation Measure H-1b (Dry weather construction), and Mitigation Measure AQ-1a (Implement Construction Fugitive Dust Control Plan) would avoid damage or destruction of nesting areas and mitigate the loss of nesting habitat, thereby reducing potential impacts to a less-than-significant level (Class II). No further mitigation is required.

Impact B-25: The Project could result in injury or mortality of, and loss of habitat for, two-striped garter snakes and south coast garter snakes.

Alternative 6 follows the same route as the proposed Project through the ANF. In addition, the West Fork Cogswell road which runs adjacent to the West Fork of the San Gabriel River would not be used and the construction of the Big Tujunga River crossing would not occur. This alternative would also restrict use of the Monte Cristo and Lynx Gulch roads and reduce potential effects to over 84 RCAs. By avoiding these major riparian areas, identical types of impacts to two-striped garter snakes and south coast garter snakes would occur, but this alternative would comprise a net decrease in the size and magnitude of direct and indirect impacts as a result of decreased ground-disturbing activity, including an approximate 42.5-mile reduction in the amount of access and spur roads to be constructed or improved. As discussed above in Section 6.1, direct impacts due to construction activities include mortality or injury of individual two-striped garter snakes and south coast garter snakes as a result of mechanical crushing; loss of nesting, breeding or basking sites; fugitive dust; and human trampling. Indirect effects to these species include degradation of water quality through siltation caused by vehicles using wet ford stream crossings; removal of vegetation; and grading of tower pads, staging areas, helicopter pads, and pulling sites. Other indirect effects include compaction of soils and introduction of exotic plant species. Furthermore, Project implementation may result in loss of habitat due to permanent structures and/or roads and temporary loss of habitat from construction activities. However, implementation of APMs BIO-1 through BIO-7 and Mitigation Measure B-1a (Provide restoration/compensation for impacts to native vegetation communities), Mitigation Measure B-1b (Implement a Worker Environmental Awareness Program),

Mitigation Measure B-3a (Prepare and implement a Weed Control Plan), Mitigation Measure B-12 (Implement avoidance and minimization measures for Santa Ana sucker and other aquatic organisms), Mitigation Measure B-25 (Conduct focused surveys for the two-striped garter snake and south coast garter snake and implement monitoring, avoidance, and minimization measures), Mitigation Measure H-1a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits), Mitigation Measure H-1b (Dry weather construction), and Mitigation Measure AQ-1a (Implement Construction Fugitive Dust Control Plan) would avoid injury or mortality to these species, thereby reducing potential impacts to a less-than-significant level (Class II). No further mitigation is required.

Impact B-26: The Project could result in injury or mortality of, and loss of habitat for, Coast Range newts.

Alternative 6 follows the same route as the proposed Project through the ANF. However, the West Fork Cogswell road which runs adjacent to the West Fork of the San Gabriel River would not be used and the construction of the Big Tujunga River crossing would not occur. This alternative would also restrict use of the Monte Cristo and Lynx Gulch roads and reduce potential effects to over 84 RCAs. By avoiding these major riparian areas, Alternative 6 would result in identical types of impacts to Coast Range newts, but comprise a net decrease in the size and magnitude of direct and indirect impacts as a result of decreased ground-disturbing activity, including an approximate 42.5-mile reduction in the amount of access and spur roads to be constructed or improved. As described above in Section 6.1, direct impacts to Coast Range newt include mechanical crushing or road kill during construction, human trampling, loss of breeding sites due to water quality degradation, fugitive dust, and loss of foraging habitat. Indirect impacts include degradation of water quality through siltation caused by vehicles using wet ford stream crossings; removal of vegetation; and grading tower pads, staging areas, helicopter pads, and pulling sites. Other indirect effects include compaction of soils and introduction of exotic plant species. However, implementation of APMs BIO-1 through BIO-7 and Mitigation Measure B-1a (Provide restoration/compensation for impacts to native vegetation communities), Mitigation Measure B-1b (Implement a Worker Environmental Awareness Program), Mitigation Measure B-3a (Prepare and implement a Weed Control Plan), Mitigation Measure B-25 (Conduct focused surveys for coast range newt and implement monitoring, avoidance, and minimization measures), Mitigation Measure H-1a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits), Mitigation Measure H-1b (Dry weather construction), and Mitigation Measure AQ-1a (Implement Construction Fugitive Dust Control Plan) would avoid injury or mortality to this species, thereby reducing impacts to a less-than-significant level (Class II). No further mitigation is required.

Impact B-27: The Project could result in injury or mortality of, and loss of habitat for, terrestrial California Species of Special Concern and Forest Service Sensitive amphibian and reptile species (special-status terrestrial herpetofauna).

Alternative 6 follows the same route as the proposed Project through the ANF. However, the West Fork Cogswell road which runs adjacent to the West Fork of the San Gabriel River would not be used and the construction of the Big Tujunga River crossing would not occur. This alternative would also restrict use of the Monte Cristo and Lynx Gulch roads and reduce potential effects to over 84 RCAs. By avoiding these major riparian areas, Alternative 6 would result in identical types of impacts to special-status terrestrial herpetofauna as the proposed Project. However, this alternative comprises a net decrease in the size and magnitude of direct and indirect impacts as a result of decreased ground-disturbing activity, including an approximate 42.5-mile reduction in the amount of access and spur roads to be constructed or

improved. The San Diego horned lizard, a California Species of Special Concern and FS Sensitive species, was identified in helicopter Site 6. As described in Section 6.1, direct impacts include being hit by vehicles on access roads; mechanical crushing during tower site preparation, grading of spur roads, and preparation of staging and stringing/pulling locations; fugitive dust; and general disturbance due to increased human activity. Furthermore, implementation of this alternative may result in permanent loss of habitat due to permanent structures and/or roads and temporary loss of habitat from construction activities. Individuals of one or more of the special-status terrestrial herpetofauna could be injured or killed during ground-disturbing activities in undeveloped upland habitats and in some developed areas throughout Alternative 6. Indirect impacts to these species include compaction of soils and the introduction of exotic plant species. However, implementation of APMs BIO-1 through BIO-7, Mitigation Measure B-1a (Provide restoration/compensation for impacts to native vegetation communities), Mitigation Measure B-1b (Implement a Worker Environmental Awareness Program), Mitigation Measure B-3a (Prepare and implement a Weed Control Plan), Mitigation Measure B-27 (Monitoring, avoidance, and minimization measures for special-status terrestrial herpetofauna), and Mitigation Measure AQ-1a (Implement Construction Fugitive Dust Control Plan) would reduce impacts to less than significant (Class II). No further mitigation is required.

Impact B-28: The Project could disturb wintering mountain plovers.

Alternative 6 is identical to the proposed Project in the Northern Region where mountain plovers have the potential to occur, and differs from the proposed Project only on the ANF where suitable habitat for this species does not occur. As with the proposed Project, the total acreage of wintering mountain plover habitat impacted by Alternative 6 is small relative to regional availability, and implementation of Alternative 6 would not restrict the range of the species. Therefore, impacts to wintering mountain plovers resulting from this alternative are identical to the proposed Project, and are less than significant (Class III).

Impact B-29: The Project would result in the loss of occupied burrowing owl habitat.

Alternative 6 follows the same route as the proposed Project through the ANF with a 42.5-mile reduction in the amount of spur and access roads constructed/upgraded. This alternative would impact similar habitats, but comprise a net decrease in the size and magnitude of direct and indirect impacts as a result of decreased ground-disturbing activity, including a reduction in the amount of access and spur roads to be constructed or improved immediately adjacent to the northern boundary of the ANF where burrowing owls have the potential to occur. As described in Section 6.1, direct impacts to burrowing owls as a result of construction activities for Alternative 6 would include the crushing of burrows, removal or disturbance of vegetation, increased noise levels from heavy equipment and helicopter operations, increased human presence, and exposure to fugitive dust. Indirect impacts could include the loss of habitat due to the colonization of noxious weeds and a disruption of breeding activity due to facilitated use of new or improved spur and access roads by the public. However, implementation of APMs BIO-2 and BIO-4 through BIO-8 and Mitigation Measure B-1a (Provide restoration/compensation for impacts to native vegetation communities), Mitigation Measure B-1b (Implement a Worker Environmental Awareness Program), Mitigation Measure B-3a (Prepare and implement a Weed Control Plan), Mitigation Measure B-29 (Implement CDFG protocol for burrowing owls), and Mitigation Measure AQ-1a (Implement Construction Fugitive Dust Control Plan) would reduce impacts to less than significant (Class II). No further mitigation is required.

Impact B-30: The Project would result in the loss of occupied California spotted owl habitat.

Alternative 6 follows the same route as the proposed Project through the ANF, impacting identical habitats suitable for California spotted owl (bigcone Douglas fir-canyon oak forest and canyon oak forest), but comprising a net decrease in the size and magnitude of direct and indirect impacts as a result of the 42.5-mile decrease in access and spur road construction. Suitable habitat for spotted owl is located at several locations, including between the helipad and the tower alignment at Sites 4 and 7. In addition, a California spotted owl was detected by AMEC during 2008 surveys within the PAC that encompasses Site 4. Increased helicopter construction would introduce a substantial increase in the amount of noise, vibration, dust, visual disturbance, and air turbulence in California spotted owl habitat. These factors could disrupt breeding activity and ultimately lead to avoidance of breeding altogether, or the failure of an already established nest. Since a limited operating period will be utilized to protect breeding and nesting, the impacts will be reduced. In addition, there would be a decrease in the disturbance to spotted owl habitat related to road improvement and construction in areas that would be constructed by helicopter. Nonetheless, increased noise and human disturbance impacts to spotted owls as a result of Alternative 6 may result in displacement from territories, interference with breeding, and abandonment of nests. However, implementation of APMs BIO-2 and BIO-4 through BIO-6 and Mitigation Measure B-1a (Provide restoration/compensation for impacts to native vegetation communities), Mitigation Measure B-3a (Prepare and implement a Weed Control Plan), Mitigation Measure B-30 (Conduct pre- and during construction nest surveys for spotted owl), and Mitigation Measure AQ-1a (Implement Construction Fugitive Dust Control Plan) would reduce impacts to less than significant (Class II). No further mitigation is required.

Impact B-31: The Project could disturb nesting California spotted owls.

As stated above, Alternative 6 would result in a net decrease in direct and indirect impacts to habitats suitable for California spotted owl (bigcone Douglas fir-canyon oak forest and canyon oak forest) due to the 42.5-mile reduction in the construction/improvement of access and spur roads. Increased helicopter construction activity during the breeding season would likely result in the displacement of breeding California spotted owls and the abandonment of active nests. A limited operating period will be in place to protect breeding and nesting spotted owls, thus the impact would be reduced. In addition, some of the spotted owl habitat on the ANF would not be included in the maximum helicopter construction portion of this alternative, and spotted owls would be subject to construction disturbance from the widening and creation of new access roads as well as stringing and pulling sites, concrete batch plant sites, tower construction and demolition, etc. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment, which would constitute take and violate the MBTA. However, implementation of APMs BIO-2 and BIO-4 through BIO-6, Mitigation Measure B-1b (Implement a Worker Environmental Awareness Program), Mitigation Measure B-30 (Conduct pre- and during construction nest surveys for spotted owl [including LOPs]), and Mitigation Measure AQ-1a (Implement Construction Fugitive Dust Control Plan) would reduce impacts to less than significant (Class II). No further mitigation is required.

Impact B-32: The Project could disturb nesting avian "species of special concern."

Alternative 6 follows the same route as the proposed Project through the ANF with a 42.5-mile reduction in the construction/improvement of access and spur roads. In addition, the West Fork Cogswell road which runs adjacent to the West Fork of the San Gabriel River would not be used and the construction of the Big Tujunga River crossing would not occur. This alternative would also restrict use of the Monte

Cristo and Lynx Gulch roads and reduce potential effects to over 84 RCAs. This alternative would result in identical types of impacts to avian “species of special concern” as described for the proposed Project (Section 6.1), but would comprise a net decrease in the size and magnitude of direct and indirect impacts as a result of decreased ground-disturbing activity. A yellow-breasted chat (California Species of Special Concern) was detected in Site 6 during July 2008 surveys. Increased construction activity during the breeding season would likely result in the displacement of breeding birds and the abandonment of active nests. Noise from increased helicopter operation, which would occur in many sections of the ANF as a result of Alternative 6, would also adversely affect nesting birds. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment, which would constitute take and violate the MBTA. However, implementation of APMs BIO-4 through BIO-6, and Mitigation Measures B-1a (Provide restoration/ compensation for impacts to native vegetation communities), B-1b (Implement a Worker Environmental Awareness Program), B-2 (Implement RCA Treatment Plan), B-3a (Prepare and implement a Weed Control Plan), B-5 (Conduct pre-construction surveys and monitoring for breeding birds), and AQ-1a (Implement Construction Fugitive Dust Control Plan) would reduce potential impacts to a less-than-significant level (Class II). No further mitigation is required.

Impact B-33: The Project could result in mortality of, and loss of habitat for, special-status bat species.

Alternative 6 follows the same route as the proposed Project through the ANF with a 42.5-mile decrease in the amount of access and spur roads constructed and improved. In addition, the West Fork Cogswell road which runs adjacent to the West Fork of the San Gabriel River would not be used and the construction of the Big Tujunga River crossing would not occur. This alternative would also restrict use of the Monte Cristo and Lynx Gulch roads and reduce potential effects to over 84 RCAs. By avoiding these major riparian areas, Alternative 6 would result in identical types of impacts to special-status bat species as described for the proposed Project (Section 6.1). However, this alternative would comprise a net decrease in the size and magnitude of direct and indirect impacts as a result of decreased ground-disturbing activity. Townsend’s big-eared bat and pallid bat (both California Species of Special Concern and FS Sensitive species), were detected during the July 2008 reconnaissance surveys. Townsend’s big-eared bat was detected in helicopter Site 7, and pallid bat was identified adjacent to Site 3 under a bridge, although suitable habitat for this species does not occur within Site 3. Increased construction activity in the vicinity of active hibernacula and maternity roosts would likely result in the displacement of bats and the abandonment of these sites. Furthermore, noise from increased helicopter operation, which would occur in many sections of the ANF as a result of Alternative 6, would also adversely affect special-status bats. As described in Section 6.1, direct impacts to these species include mortality of individuals during construction activities, permanent loss of habitat due to construction of permanent structures (e.g., new towers or access roads) or other construction activities (removal of roosting habitat at pulling and assembly sites), and temporary disturbance during construction (noise, air turbulence, dust, and ground vibrations from helicopters and construction equipment). Bats that forage near the ground, such as the pallid bat, would also be subject to crushing or disturbance by vehicles driving at dusk, dawn, or during the night. Construction-related activities, which would generate noise, traffic, dust, and diesel fumes, could result in the direct loss of roosting habitat and subsequent mortality to adult bats or pups if any bats were present in the proposed Project area. Indirect effects could include increased traffic, dust, and human presence in the Project area that could result in bats abandoning their roosts or maternal colonies. However, implementation of APMs BIO-1, BIO-4, BIO-6, and Mitigation Measures B-1a (Provide

restoration/ compensation for impacts to native vegetation communities), B-1b (Implement a Worker Environmental Awareness Program), B-2 (Implement RCA Treatment Plan), B-3a (Prepare and implement a Weed Control Plan), AQ-1a (Implement Construction Fugitive Dust Control Plan), B-33a (Maternity colony or hibernaculum surveys for roosting bats), B-33b (Provision of substitute roosting bat habitat), and B-33c (Exclude bats prior to demolition of roosts) would reduce impacts to a less-than-significant level (Class II). No further mitigation is required.

Impact B-34: The Project could result in transmission line strikes by special-status bat species.

As the characteristics of the towers and lines that would be constructed under Alternative 6 are identical to the proposed Project, the risk of collision with overhead wires by special-status bat species would be the same as described for the proposed Project (Section 6.1). Because most bat species can use echolocation to discriminate objects as small as 0.4 to 0.004 inches in size (Vaughan, 1986), and the size of guard lines and 500-kV or 220-kV transmission lines are typically equal to or greater than 0.5 inches in diameter (SCE, 2007), the frequency of transmission line strikes is expected to be extremely low. Therefore, impacts associated with Alternative 6 are identical to the proposed Project and are less than significant (Class III).

Impact B-35: The Project could result in mortality of and loss of habitat for, special-status mammals.

Alternative 6 follows the same route as the proposed Project through the ANF with a 42.5-mile reduction in the construction and improvement of access and spur roads, resulting in a net decrease in the size and magnitude of direct and indirect impacts as a result of decreased ground-disturbing activity. This reduction in impacts would only affect the Los Angeles pocket mouse and San Diego black-tailed jackrabbit as potential habitat for the other species identified in Section 6.1 does not occur on the ANF and impacts to these species would be identical to the proposed Project (see Table 6-6). Any potential mortality associated with the implementation of Alternative 6 would be quite small relative to the overall population size and range of these species. Furthermore, because habitat for these species is limited in the ANF, and relatively abundant elsewhere, the habitat impacted by implementation of Alternative 6 would not substantially reduce available habitat, restrict the range, or cause regional populations to drop below self-sustaining levels. Implementation of APM BIO-1 and APM BIO-5 and Mitigation Measure B-1a (Provide restoration/compensation for impacts to native vegetation communities), Mitigation Measure B-1b (Implement a Worker Environmental Awareness Program), Mitigation Measure B-2 (Implement RCA Treatment Plan), Mitigation Measure B-3a (Prepare and implement a Weed Control Plan), and Mitigation Measure AQ-1a (Implement Construction Fugitive Dust Control Plan) would minimize impacts to special-status mammal species. Therefore, impacts to these species as a result of implementation of Alternative 6 would be less than significant with mitigation incorporated (Class II).

Impact B-36: The Project could result in mortality of San Diego desert woodrats.

Alternative 6 follows the same route as the proposed Project through the ANF with a 42.5-mile reduction in the amount of access and spur roads that would be constructed or improved, resulting in a net decrease in the size and magnitude of direct and indirect impacts as a result of decreased ground-disturbing activity. As described in Section 6.1, direct impacts from construction activities would include the mortality of individual San Diego desert woodrats or disturbance (noise, air turbulence, dust, and ground vibrations from helicopters and construction equipment) to occupied desert woodrat nests. Construction and use of access roads would also result in impacts to this species. Indirect impacts to San Diego desert

woodrats include the spread of noxious weeds that would degrade habitat quality and alteration of soils. However, implementation of APMs BIO-1 and BIO-4 through BIO-6, Mitigation Measure B-1a (Provide restoration/compensation for impacts to native vegetation communities), Mitigation Measure B-1b (Implement a Worker Environmental Awareness Program), Mitigation Measure B-3a (Prepare and implement a Weed Control Plan), Mitigation Measure B-36 (Conduct focused surveys for San Diego desert woodrats and passively relocate), and Mitigation Measure AQ-1a (Implement Construction Fugitive Dust Control Plan) in the areas of suitable habitat would reduce impacts to less than significant (Class II). No further mitigation is required.

Impact B-37: The Project could result in mortality of and loss of habitat for, the ringtail.

Alternative 6 follows the same route as the proposed Project through the ANF with a 42.5-mile reduction in the amount of access and spur roads that would be constructed and improved. In addition, the West Fork Cogswell road which runs adjacent to the West Fork of the San Gabriel River would not be used and the construction of the Big Tujunga River crossing would not occur. This alternative would also restrict use of the Monte Cristo and Lynx Gulch roads and reduce potential effects to over 84 RCAs. Alternative 6 would result in a net decrease in the size and magnitude of direct and indirect impacts as a result of decreased ground-disturbing activity. As described in Section 6.1, direct impacts due to construction activities would include mortality of individual ringtails or disturbance of ringtail maternity dens during the pup-rearing season (1 May to 1 September). The construction and use of access roads in riparian areas could also disturb denning ringtails. Construction noise, dust, human presence, or ground disturbance could result in the abandonment of these nest sites or result in mortality of juvenile animals. Indirect impacts to ringtails could include the spread of noxious weeds that would degrade habitat quality, degradation of water quality due to siltation, and alteration of soils. However, the implementation of APMs BIO-1, BIO-4, and BIO-6 and Mitigation Measures B-1a (Provide restoration/compensation for impacts to native vegetation communities), B-1b (Implement a Worker Environmental Awareness Program), B-3a (Prepare and implement a Weed Control Plan), B-37 (Conduct focused surveys for ringtail and passively relocate during the non-breeding season), H-1a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits), and AQ-1a (Implement Construction Fugitive Dust Control Plan), would reduce impacts to ringtails to a less-than-significant level (Class II). No further mitigation is required.

Impact B-38: The Project could result in mortality of American badgers.

Alternative 6 follows the same route as the proposed Project through the ANF with a 42.5-mile reduction in the construction and improvement of access and spur roads. This alternative would result in identical types of impacts to badgers, but comprise a net decrease in the size and magnitude of direct and indirect impacts as a result of decreased ground-disturbing activity. As described in Section 6.1, direct impacts to American badgers include mechanical crushing of individuals or burrows by vehicles and construction equipment, noise, dust, and loss of habitat. Indirect impacts include alteration of soils, such as compaction that could preclude burrowing, and the spread of exotic weeds. However, any potential mortality would be quite small relative to the overall population size of the American badger and this species has not been recently observed on the ANF. Implementation of APMs BIO-1, BIO-4, BIO-6 and Mitigation Measures B-1a (Provide restoration/compensation for impacts to native vegetation communities), B-1b (Implement a Worker Environmental Awareness Program), Mitigation Measure B-3a (Prepare and implement a Weed Control Plan), B-38 (Conduct focused surveys for American badger and passively relocate during the non-

breeding season), and AQ-1a (Implement Construction Fugitive Dust Control Plan) would reduce impacts to less than significant (Class II). No further mitigation is required.

Have a substantial adverse effect on federally protected wetlands (Criterion BIO4)

Impact B-39: The Project could result in the loss of wetland habitats.

Any loss of these habitats associated with the proposed Project or alternatives is significant. Alternative 6 follows the same route as the proposed Project through the ANF with a 42.5-mile reduction in the construction and improvement of access and spur roads. In addition, the West Fork Cogswell road which runs adjacent to the West Fork of the San Gabriel River would not be used and the construction of the Big Tujunga River crossing would not occur. This alternative would also restrict use of the Monte Cristo and Lynx Gulch roads and reduce potential effects to over 84 RCAs. By avoiding these major riparian areas, Alternative 6 would result in the identical types of impacts to federally protected wetlands, but comprise a net decrease in the size and magnitude of direct and indirect impacts as a result of decreased ground-disturbing activity. Helicopter staging areas associated with this alternative would be located in upland areas away from wetlands. However, improvements to remaining access roads and construction of towers may impact wetland habitats. If avoidance of jurisdictional waters and wetlands is not possible, implementation of APMs BIO-1 through BIO-7, and Mitigation Measures B-1a (Provide restoration/compensation for impacts to native vegetation communities), B-1b (Implement a Worker Environmental Awareness Program), B-2 (Implement RCA Treatment Plan), B-3a (Prepare and implement a Weed Control Plan), B-12 (Implement avoidance and minimization measures for Santa Ana sucker and other aquatic organisms), H-1a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits), and AQ-1a (Implement Construction Fugitive Dust Control Plan) would reduce the impacts to federally protected wetlands to less-than-significant levels (Class II). No further mitigation is required.

Interfere substantially with native fish or wildlife movements, corridors, or nursery sites (Criterion BIO5)

Impact B-40: The Project could interfere with established bird and bat migratory corridors.

Alternative 6 follows the same route as the proposed Project, and consists of the same tower and transmission line characteristics, resulting in identical impacts to bird and bat migratory corridors. Implementation of APM BIO-9 as part of the proposed Project would ensure this impact would be less than significant (Class III). No further mitigation is required.

Impact B-41: Corona noise could result in disturbance to wildlife.

Corona generates audible noise during operation of transmission lines. The noise is generally characterized as a crackling, hissing, or humming sound and is most noticeable during wet conductor conditions such as rain or fog. Alternative 6 follows the exact same route as the proposed Project and includes the same components along Segments 6 and 11 through the ANF. Implementation of Alternative 6 would result in exactly the same impacts related to corona noise as the proposed Project. As the effects of corona noise on wildlife are poorly understood, it is difficult to predict the degree to which the increase in corona noise of Alternative 6 would impact local wildlife. Corona noise is already present along most of Alternative 6, including in the ANF at levels ranging from less than 20 dBA to 51 dBA (see Table

3.10-3, of Section 3.10, Noise), and while Alternative 6 would result in louder corona noise for most segments at levels ranging from 22 to 60dBA (see Table 3.10-5, of Section 3.10, Noise), and a new source of corona noise for the new segments, wildlife can be expected to have already been exposed and likely habituated to this disturbance. Therefore, implementation of Alternative 6 would not result in substantial impacts to wildlife due to corona noise. This impact would be less than significant (Class III).

Impact B-42: The Project would result in effects to Management Indicator Species.

Alternative 6 follows the same route as the proposed Project through the ANF with a 42.5-mile reduction in the construction and improvement of access and spur roads. In addition, the West Fork Cogswell road which runs adjacent to the West Fork of the San Gabriel River would not be used and the construction of the Big Tujunga River crossing would not occur. This alternative would also restrict use of the Monte Cristo and Lynx Gulch roads and reduce potential effects to over 84 RCAs. With the implementation of this alternative there may be some temporary increases in noise effects from helicopter use to MIS such as spotted owl, mountain lion, song sparrow, or mule deer; however, these effects would be considered short term. In addition, loss of bigcone Douglas fir habitat would decrease from 6.9 acres under Alternative 2 to 5.2 acres under Alternative 6. However, loss of Coulter pine habitat would increase under this alternative (7.7 acres under Alternative 2 and 10.1 acres under Alternative 6). This alternative would result in a reduction in disturbance to important riparian areas where many MIS are known to occur. Implementation of APMs BIO-1 through BIO-7 and Mitigation Measures B-1a (Provide restoration/compensation for impacts to native vegetation communities), B-1b (Implement a Worker Environmental Awareness Program), B-1c (Treat cut tree stumps with Sporax), B-2 (Implement RCA Treatment Plan), B-3a (Prepare and implement a Weed Control Plan), B-3b (Remove weed seed sources from construction routes), B-3c (Remove weed seed sources from assembly yards, staging areas, tower pads, pull sites, landing zones, and spur roads), B-5 (Conduct pre-construction surveys and monitoring for breeding birds), B-8b (Conduct biological monitoring), B-9 (Conduct protocol surveys for arroyo toads and implement avoidance measures in occupied areas), B-30 (Conduct pre- and during- construction nest surveys for spotted owl), AQ-1a (Implement Construction Fugitive Dust Control Plan), H-1a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits), and H-1b (Dry weather construction) would reduce impacts to less than significant (Class II). No further mitigation is required.

Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (Criterion BIO6)

Alternative 6 follows the same route as the proposed Project through the ANF, resulting in identical impacts to biological resources but comprising a net decrease in the size and magnitude of direct and indirect impacts as a result of decreased ground-disturbing activity, including an approximate 42.5-mile reduction in the amount of access and spur roads to be constructed or improved. However, because of the extensive planning involved in Project design, including implementation of APMs BIO-1 through BIO-7, and the mitigation measures described above in Criteria BIO1 through BIO5, Alternative 6 is consistent with the local and regional policies and ordinances protecting biological resources including the Los Angeles County Tree Removal requirements, the Palmdale Municipal Code, and the California Desert Native Plants Act, and impacts related to Criterion BIO6 are identical to the proposed Project (no impact).

Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Communities Conservation Plan (NCCP), or other approved local, regional, or state HCP (Criterion BIO7)

Through Project design and implementation of APMs BIO-1 through BIO-7 and the mitigation measures described in Criteria BIO1 through BIO5, SCE shall ensure consistency with the conservation goals of the WMPHCP. Alternative 6 follows the same route as the proposed Project through the ANF with a 42.5-mile reduction in the construction and improvement of access and spur roads, resulting in identical types of impacts to biological resources but comprising a net decrease in the size and magnitude of direct and indirect impacts as a result of decreased ground-disturbing activity. However, the area where Alternative 6 differs from the proposed Project is located outside of the WMPHCP coverage area and therefore would result in identical impacts as the proposed Project (no impact).

10.2 Cumulative Effects Analysis

This section addresses potential cumulative effects that would occur as a result of implementation of Alternative 6. In Segments 6 and 11, the maximum number of towers would be constructed via helicopter, and 11 new helicopter staging areas would be constructed (12 helicopter staging areas would be constructed under the proposed Project).

Alternative 6 follows the same route as the proposed Project through the ANF, impacting similar habitats and species, but comprising a net decrease in the size and magnitude of direct and indirect impacts as a result of decreased ground-disturbing activity, including an approximate 42.5-mile reduction in the amount of access and spur roads to be constructed or improved.

10.2.1 Geographic Extent

Alternative 6 only differs from the proposed Project within the ANF. This area is still encompassed by the geographic extent of the cumulative analysis defined for Alternative 2 in Section 6.2.1. Therefore, the geographic extent of the cumulative analysis for Alternative 6 is exactly the same as that for Alternative 2 and would include all of the Northern, Central, and Southern Regions.

10.2.2 Existing Cumulative Conditions

The existing cumulative conditions for Alternative 6 are exactly the same as for Alternative 2, as described in Section 6.2.2.

10.2.3 Reasonably Foreseeable Future Projects and Changes

Reasonably foreseeable future projects and changes to the cumulative scenario for Alternative 6 would be exactly the same as Alternative 2, described in Section 6.2.3.

10.2.4 Cumulative Impact Analysis

As described in Section 6.2.4, impacts associated with Alternative 6 would be cumulatively considerable if they would have the potential to combine with similar impacts of other past, present, or reasonably foreseeable projects. Cumulative impacts of Alternative 6 would be less than cumulative impacts for Alternative 2, due to a decrease in new road construction and improvement. This is most evident on the ANF where cumulative impacts would be reduced for several special-status species when compared to Alternative 2. However, because of the substantial similarity of Alternative 6 to Alternative 2 over the

project as a whole, cumulative impacts would be very similar to those described for Alternative 2, except on the ANF.

10.2.5 Mitigation to Reduce the Project's Contribution to Significant Cumulative Effects

Mitigation measures introduced for Alternative 6 in Section 10.1 (Direct and Indirect Effects Analysis) would help to reduce this alternative's incremental contribution to cumulative impacts. However, no additional mitigation measures have been identified that would reduce cumulative impacts to a less-than-significant level.