

COVER SHEET

FEDERAL ENERGY REGULATORY COMMISSION

FINAL ENVIRONMENTAL IMPACT STATEMENT
FOR HYDROPOWER LICENSE

Lake Elsinore Advanced Pumped Storage Project
Docket No. P-11858-002

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APPENDIX G

Management Indicator Species Analysis

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APPENDIX G
MANAGEMENT INDICATOR SPECIES ANALYSIS

1. INTRODUCTION

The purpose of this assessment is to evaluate the effects of the Lake Elsinore Advanced Pumped Storage Project (LEAPS Project) on Management Indicator Species (MIS) identified in the Land Management Plan (LMP) for the southern California forests (USFS, 2005a).

2. PROJECT DESCRIPTION

In February, 2004, the Elsinore Valley Municipal Water District (Elsinore Valley MWD) and the Nevada Hydro Company, Inc. (Nevada Hydro), or co-applicants, filed an application for an original license with the Federal Energy Regulatory Commission (Commission or FERC) for the construction and operation of a 500-MW pumped storage project. The project would use Lake Elsinore as a lower reservoir, and would require construction of an upper reservoir within the boundaries of the Cleveland National Forest. The project, including an approximately 30-mile-long transmission line, would occupy about 2,412 acres of federal lands, including National Forest System lands. The co-applicants filed a special use permit application for the TE/VS Interconnect Project with the U.S. Forest Service (USFS) in July 2003. Under the Federal Land Policy and Management Act, the USFS must decide whether to grant an easement for rights of way over, across, and upon National Forest System lands for electrical poles and lines for the transmission and distribution of electrical power.

The proposed action consists of an upper reservoir in Morrell Canyon, a powerhouse at the Santa Rosa location, and a transmission line that crosses the Cleveland National Forest. The staff alternative consists of an upper reservoir at the Decker Canyon site, a powerhouse at the Santa Rosa location, and a transmission line with an alignment similar to the proposed route. For a detailed description of the proposed action and the staff alternative and maps of the project area, refer to the LEAPS Project final environmental impact statement (final EIS).

3. MIS SELECTED FOR THE PROJECT

Table G-1 shows the MIS selected for the four southern California forests, what each is intended to represent, and whether they occur in the LEAPS Project area. As shown in the table, blue oak, Englemann oak, valley oak, bigcone Douglas-fir, Coulter pine, California black oak and white fir do not occur in the project area. The remaining five MIS (mountain lion, mule deer, arroyo toad, song sparrow and California spotted owl) are relevant to the LEAPS Project, and could be affected by construction and operation.

Table G-1. Management Indicator Species selected for the four southern California forests.

Species	Indicators of Management	Relevance to LEAPS Project
Mountain lion	Fragmentation	Known to occur in the project area
Mule deer	Healthy, diverse habitats	Known to occur in the project area
Arroyo toad	Aquatic habitat	Potential habitat in the project area, but not documented to occur
Song sparrow	Riparian habitat	Known to occur in the project area
California spotted owl	Montane conifer forest	Known to occur near the project area
Blue oak	Oak regeneration	Does not occur in the project area

Species	Indicators of Management	Relevance to LEAPS Project
Engelmann oak	Oak regeneration	Does not occur in the project area
Valley oak	Oak regeneration	Does not occur in the project area
Bigcone Douglas-fir	Bigcone Douglas fir forest	Does not occur in the project area
Coulter pine	Coulter pine forest	Does not occur in the project area
California black oak	California black oak forest	Does not occur in the project area
White fir	Montane conifer forest	Does not occur in the project area

In the following sections, we summarize the environmental baseline and potential environmental effects of the LEAPS Project on MIS. Most of the baseline information is taken from species accounts that were developed to provide technical support for the LMP (USFS, 2005b). Detailed information about the environmental baseline for each species (general distribution, distribution in the national forests of southern California, natural history, population and /or habitat status and trends on National Forest System lands, predicted viability outcomes, and threats and conservation considerations) is available on-line in the “reading room” associated with the LMP (USFS, 2006b).

For each species, the discussion of environmental effects focuses on project elements that would be located on National Forest System lands. The FEIS for the LEAPS Project contains additional analysis about potential effects within the broader project area, which also includes non-National Forest System lands. Section 3.3.4.2, *Terrestrial Resources*, of the final EIS discusses effects on mountain lion, mule deer, song sparrow and California spotted owl. Section 3.3.5.2, *Threatened and Endangered Species*, addresses effects on the arroyo toad.

4. MIS ENVIRONMENTAL BASELINE AND ENVIRONMENTAL EFFECTS

4.1 Mountain Lion

The Cleveland National Forest chose the mountain lion as an MIS to evaluate planning and management of habitat fragmentation and habitat linkages (USFS, 2005a). The USFS management goal for this species is to ensure functional landscape linkages and ensure the population is well-distributed.

4.1.1 Environmental Baseline

Mountain lions are habitat generalists, inhabiting a variety of habitat types throughout California. They use any area with predominantly native, woody vegetation; ample prey (especially mule deer); and low density of human inhabitants (Dickson et al., 2005). They are rare at higher elevations in pure stands of conifers and at lower elevations in pure stands of chamise chaparral.

While mountain lions may be thriving in some areas of northern California, they are considered imperiled in some of southern California's highly fragmented wildlands (Stephenson and Calcarone 1999). Beier (1991) estimates a population of about 20 mountain lions in the Santa Ana Mountains of the Cleveland National Forest. This population is isolated as a result of habitat fragmentation, and is likely to be extirpated unless adequate movement corridors are established and protected between the Santa Anas and the Palomar Range to the east.

A 5-year study of mountain lions in the Santa Ana Mountains showed that two animals occupied home ranges that included sites where LEAPS Project features would be constructed (Beier and Barrett, 1993). One of these animals (a young male) was documented several times in upper Morrell Canyon. Radio-tracking of both this individual and one other mountain lion (an adult female) showed frequent

movements near the northern segment of the proposed transmission alignment route, parallel with the ridgeline (a northwest-southeast orientation).

4.1.2 Environmental Effects

Effects of the Proposed Action on Mountain Lion Habitat

Construction of an upper reservoir at Morrell Canyon would temporarily disturb about 140 acres of suitable mountain lion habitat and convert about 100 acres, including 20 acres of riparian oak woodland, to project use. The reservoir would be located on top of Lion Spring. Water from the upper drainage area would be collected and conveyed under the reservoir, and returned to the creek downstream of the dam.

Construction would affect about 0.25 acre at each of 85 transmission tower sites, and would convert about 21.25 acres of suitable mountain lion habitat to project use. Some temporary access roads would be constructed, and then obliterated and revegetated, but many of the towers would be installed using helicopters to avoid road construction on steep slopes. Locations of any access roads that may be constructed are not known at this point in the design process.

Construction of the underground transmission line segment would temporarily disturb about 23.2 acres within suitable mountain lion habitat, and convert about 5.8 acres to permanent maintenance road.

Noise disturbance would occur during construction. Maintenance activities during project operation would cause localized disturbance at the reservoir site, but disturbance levels would not be substantially greater than those that occur under existing conditions along the South Main Divide Road and Morgan Trail. The co-applicants would use helicopters to maintain the transmission line, which would cause temporary, localized disturbance.

Effects of the Staff Alternative on Mountain Lion Habitat

Construction of an upper reservoir at Decker Canyon would temporarily disturb about 140 acres of suitable habitat, and convert about 100 acres, including 5 acres of riparian oak woodland, to project use. No springs or seeps would be affected by construction, and no water conveyance system is thought to be necessary.

Construction would affect about 0.25 acre at each of an estimated 85 transmission tower sites and would convert about 21.25 acres to project use. The southern segment of the alternative alignment is located east of the proposed alignment and closer to the edge of the National Forest System boundary over several miles of the route, or follows immediately along the edge of the National Forest System boundary. Any temporary access roads needed for this alignment would presumably also be closer to the edge of the National Forest System boundary. Many of the towers would be installed using helicopters to avoid road construction on steep slopes. Locations of any access roads that may be constructed are not known at this point in the design process.

Construction of the underground transmission line segment would temporarily disturb about 15.1 acres within suitable mountain lion habitat, and convert about 3.4 acres to permanent maintenance road.

Noise disturbance would occur during construction. Maintenance activities during project operation would cause localized disturbance at the reservoir site. Disturbance levels would be slightly greater than those that occur under existing conditions along the South Main Divide Road, because construction would occur at a site that does not support any recreation activity. The co-applicants would use helicopters to maintain the transmission line, which would cause temporary, localized disturbance.

Effects on Mountain Lion Habitat and/or Population Trends

Construction of either project alternative would contribute to the downward trend in habitat availability for mountain lions in southern California, and would likely contribute to downward population trends for this species in the Santa Ana Mountains. Effects associated with Morrell Canyon would be more substantial than those that would occur at Decker Canyon, due to the loss of more oak woodland. Based on radio-tracking studies (Beier and Barrett, 1993), upper Morrell Canyon (and Lion Spring) may provide an important habitat element for mountain lions. Lion Spring may also be important for mule deer, their primary prey.

The transmission line itself would not likely block mountain lion movement or interfere with existing or proposed linkages, because transmission towers typically would be spaced at intervals of 1,000 to over 1,700 feet, and vegetation would not be removed beneath the line, except as needed for fuel management during project operation. The staff alternative alignment is closer to the edge of the National Forest System boundary, and intrudes less into mountain lion habitat. Access roads would also likely intrude less into mountain lion habitat under the staff alternative alignment. For this reason, the staff alternative transmission alignment should have less effect on mountain lion habitat or population trends.

Permanent maintenance or temporary access roads would not likely block mountain lion movement, since mountain lions often travel along lightly used dirt roads, but would increase the risk of disturbance (including illegal harvest) and damage to habitat, if public access is not controlled. Implementation of weed management and road management plans would reduce the potential for adverse effects.

4.2 Mule Deer

The Cleveland National Forest uses mule deer as an indicator of healthy, diverse habitats with low to moderate levels of human disturbance (USFS, 2005a). The USFS management goal for mule deer is to maintain stable or increasing well-distributed populations.

4.2.1 Environmental Baseline

In low-elevation mountain ranges of southern California, such as the Santa Ana Mountains, mule deer reach their highest densities in oak woodlands, riparian areas, and meadow and grassland margins. They also occur in open scrub and young chaparral.

The LMP indicates that the four southern California national forests support most of the deer in the southern part of California (USFS, 2005b). The USFS (2005b) reports that the Santa Ana population is estimated at about 950 deer. Based on analysis of trends between 1990 and 1996, CDFG believes that populations are stable in the South Coast Deer Analysis Unit (DAU 7), which includes the Santa Ana Mountains (CDFG, 1998). More recently, the USFS estimated the population in hunt zones D-15 and D-16 of DAU 7, which are located in the Cleveland National Forest, at 3,360 (USFS, 2005b).

Effects of the Proposed Action on Mule Deer Habitat

Construction of an upper reservoir at Morrell Canyon would temporarily disturb about 140 acres of suitable mule deer habitat and convert about 100 acres, including 20 acres of riparian oak woodland, to project use. The reservoir would be located on top of Lion Spring, which may be important as a water source for mule deer. However, water from the upper drainage area would be collected and conveyed under the reservoir, and returned to the creek downstream of the dam.

Construction would affect about 0.25 acre at each of 85 transmission tower sites, and would convert about 21.25 acres of suitable mule deer habitat to project use. Some temporary access roads would be constructed, and then obliterated and revegetated, but many of the towers would be installed

using helicopters to avoid road construction on steep slopes. Locations of any access roads that may be constructed are not known at this point in the design process.

Construction of the underground transmission line segment would temporarily disturb about 23.2 acres within suitable mule deer habitat, and convert about 5.8 acres to permanent maintenance road.

Noise disturbance would occur during construction. Maintenance activities during project operation would cause localized disturbance at the reservoir site, but disturbance levels would not be substantially greater than those that occur under existing conditions along the South Main Divide Road and Morgan Trail. The co-applicants would use helicopters to maintain the transmission line, which would cause temporary, localized disturbance.

Effects of the Staff Alternative on Mule Deer Habitat

Construction of an upper reservoir at Decker Canyon would temporarily disturb about 140 acres of suitable mule deer habitat and convert about 100 acres, including 5 acres of riparian oak woodland, to project use. No springs or seeps would be affected by construction, and no water conveyance system is thought to be necessary.

Construction would affect about 0.25 acre at each of an estimated 85 transmission tower sites and would convert about 21.25 acres to project use. Temporary access roads would likely be constructed to provide access to the transmission line route, but many of the towers would be installed using helicopters to avoid road construction on steep slopes. Locations of any access roads that may be constructed are not known at this point in the design process.

Construction of the underground transmission line segment would temporarily disturb about 15.1 acres within suitable mule deer habitat and convert about 3.4 acres to permanent maintenance road.

Noise disturbance would occur during construction. Maintenance activities during project operation would cause localized disturbance at the reservoir site. Disturbance levels are currently low, because the Decker Canyon site does not provide trail access. For this reason, maintenance activity would represent a small incremental increase in Decker Canyon. The co-applicants would use helicopters to maintain the transmission line, which would cause temporary, localized disturbance.

Effects of the Project on Mule Deer Habitat and/or Population Trends

Construction of either project alternative would contribute to downward trends in habitat for mule deer that have occurred as a result of residential and urban development in southern California. Loss of habitat would eventually also contribute to downward trends in population, although a 1998 CDFG report indicated the population trend in DAU 7 is stable. Riverside County is one of the five counties anticipated to be most affected by loss of habitat for deer between 2000 and 2020 (CDFG, 2004). Loss of a larger area of oak woodland at Morrell Canyon would have a more substantial effect than loss of habitat at Decker Canyon, because mule deer use oak woodlands for thermal and hiding cover, and rely heavily on acorns as a food resource in the fall (Zeiner et al., 1990).

Road densities would slightly increase under either alternative, and increase the risk of disturbance (including illegal harvest) and habitat damage during project operation, if public access is not controlled. Implementation of weed management and road management plans would reduce the potential for adverse effects.

4.3 Arroyo Toad

The arroyo toad is an indicator of aquatic habitat quality. The Cleveland National Forest anticipates that long term trends in arroyo toad abundance, distribution and habitat condition will reflect the effectiveness of protection and improvement measures for arroyo toads and other riparian dependent

species on National Forest System lands. The USFS management goal for this species is to maintain properly functioning streams and stable or increasing populations (USFS, 2005a).

4.3.1 Environmental Baseline

The arroyo toad is endemic to the coastal plains, mountains, and desert slopes of central and southern California and northwestern Baja California from near sea level to about 8,000 feet. Within these areas, arroyo toads are found in both perennial and intermittent rivers and streams with shallow, sandy to gravelly pools adjacent to sand or fine gravel terraces.

Arroyo toads occur in most of the major stream systems on the Cleveland National Forest. While populations on the Cleveland National Forest and surrounding lands are more numerous than on the other forests, many appear to be small. Most of the populations occur right along the national forest boundary, with the bulk of prime breeding habitat often lying just off National Forest System lands.

The FWS recovery plan indicates the arroyo toad is present in the headwaters of San Mateo Creek and some of its tributaries, and identifies San Juan Creek from Decker Canyon to the Orange County line as being within Recovery Unit 10 (FWS, 1999). In April 2005, FWS revised the boundaries of designated critical habitat for the arroyo toad (70 FR 70). No critical habitat is now designated within the San Juan Creek or San Mateo Creek drainages in Riverside or Orange County.

Essential habitat for this species is located in the San Juan Creek drainage downstream of the Riverside/Orange County line, about 4 miles south of Morrell and Decker canyons (70 FR 70).

The co-applicants' consultant, MBA, identified potential habitat for the arroyo toad at one location on the northern segment of the proposed transmission alignment (Temescal Wash), outside National Forest System lands, and at two locations along the southern segment (Los Alamos Canyon and Tenaja Creek), where the transmission alignment would cross streams and associated riparian habitat. MBA conducted surveys for the arroyo toad at each of these sites but did not observe any evidence of this species (MBA, 2004).

4.3.2 Environmental Effects

Effects of the Proposed Action on Arroyo Toad Habitat

Construction of an upper reservoir at Morrell Canyon would not affect arroyo toad habitat.

Construction of two transmission towers could affect about 0.5 acre of essential habitat at Los Alamos Canyon and Tenaja Creek crossings, if they are constructed within 1,640 feet of riparian habitat. Construction of two towers at Temescal Wash could affect 0.5 acre of potential habitat. However, towers generally would be constructed at the tops of slopes and along ridgelines, rather than in canyon draws or stream bottoms that would support riparian habitat.

Temporary road construction could affect the suitable toad habitat, including tributaries to the San Mateo Creek watershed. Locations of any access roads that may be constructed are not known at this point in the design process. However, existing roads or helicopters would be used to install most transmission line towers to avoid road construction on steep slopes.

Construction of the underground segment of the transmission line would not affect arroyo toad habitat.

Effects of the Staff Alternative on Arroyo Toad Habitat

Construction of an upper reservoir at Decker Canyon would not affect arroyo toad habitat.

Construction of two transmission towers could affect about 0.5 acre of essential habitat at Los Alamos Canyon and Tenaja Creek crossings, if they are constructed within 1,640 feet of riparian habitat. Construction of two towers at Temescal Wash could affect 0.5 acre of potential habitat. However, towers generally would be constructed at the tops of slopes and along ridgelines, rather than in canyon draws or stream bottoms that would support riparian habitat.

Temporary road construction could affect the suitable toad habitat, including tributaries to the San Mateo Creek watershed. Locations of any access roads that may be constructed are not known at this point in the design process. However, existing roads or helicopters would be used to install most transmission line towers to avoid road construction on steep slopes.

Construction of the underground segment of the transmission line would not affect arroyo toad habitat.

Effects on Arroyo Toad Habitat and/or Population Trends

Construction of an upper reservoir at either Morrell Canyon or Decker Canyon would not affect arroyo toad habitat or population trends. No habitat is present at the site, and the risk of adverse effects occurring downstream in the event of a dam failure is small. High hazard dams (such as would be constructed at either location) must be designed to withstand the probable maximum flood and the maximum credible earthquake, and are subject to regular federal and state inspections.

Construction of transmission towers and access roads is anticipated to avoid riparian habitat, for the most part. Construction of either transmission alignment could cause a small reduction (i.e., 0.5 to 1.0 acre) in potential habitat, but would not likely contribute to downward population trends, since no arroyo toad populations are known in the project area.

If located in riparian habitats, temporary access roads could increase the risk of erosion and sedimentation during construction. Implementation of best management practices to prevent erosion and sedimentation would reduce the potential for adverse effects on streambank stability and water quality.

If located in riparian habitats, temporary access roads could also increase the risk of disturbance and habitat damage during project operation, unless public access is controlled. Implementation of weed management and road management plans reduce the potential for adverse effects.

4.4 Song Sparrow

The Cleveland National Forest selected the song sparrow as an MIS for the health of riparian habitat (USFS, 2005a). The USFS management goal for this species is to maintain stable or increasing populations and healthy riparian habitat.

4.4.1 Environmental Baseline

In California, this species breeds primarily in riparian habitat or wetlands, where it typically nests in herbaceous vegetation or shrubs. The LMP describes song sparrows as being well distributed in southern California forests; surveyors documented song sparrows at 197 out of 206 point count stations during an 8-year period of forest riparian bird count surveys.

The Partners in Flight Species Assessment (Panjabi et al., 2005) indicates population trends are highly variable or unknown within the species' range, and predicts a slight to moderate decline in future suitability of breeding conditions. The LMP describes a significant negative trend in populations on National Forest System lands, and a slight downward (but insignificant) trend on non-National Forest System lands in the California foothills (USFS, 2005b). However, the LMP also emphasizes protection and enhancement of riparian condition, and indicates the trend for this habitat type should be stable or improving.

Effects of the Proposed Action on Song Sparrow Habitat

Construction of an upper reservoir at Morrell Canyon would convert about 20 acres of riparian oak woodland to project use. The reservoir would be located on top of Lion Spring. Water from the upper drainage area would be collected and conveyed under the reservoir, and returned to the creek downstream of the dam.

Tower construction would affect some song sparrow habitat where the alignment crosses streams, but towers generally would be sited along ridgelines and at the tops of slopes, rather than in canyon draws or stream bottoms that might support riparian forest or shrub. Temporary access roads would presumably also avoid steep canyon draws and riparian habitat, and should not affect song sparrow habitat during either construction or operation. Locations of any access roads that may be constructed are not known at this point in the design process. However, existing roads or helicopters would be used to install most transmission line towers to avoid road construction on steep slopes.

Construction of the underground transmission line segment and the permanent maintenance road alongside it would be located primarily in chaparral and would not affect song sparrow habitat.

Noise disturbance would occur during construction. Maintenance activities during project operation would cause localized disturbance at the reservoir site, but disturbance levels would not be substantially greater than those that occur under existing conditions along the South Main Divide Road and Morgan Trail. The co-applicants would use helicopters to maintain the transmission line, which would cause temporary, localized disturbance.

Effects of the Staff Alternative of Song Sparrow Habitat

Construction of an upper reservoir at Decker Canyon would convert about 5 acres of riparian oak woodland to project use. No seeps or springs are present, and no water conveyance system is thought to be needed.

Tower construction would affect some song sparrow habitat, but towers generally would be sited along ridgelines and at the tops of slopes, rather than in canyon draws or stream bottoms that might support riparian forest or shrub. Locations of any access roads that may be constructed are not known at this point in the design process. Temporary access roads would presumably also avoid steep canyon draws and riparian habitat, and should not affect song sparrow habitat during either construction or operation.

Construction of the underground transmission line segment and the permanent maintenance road alongside it would be located primarily in chaparral and would not affect song sparrow habitat.

Noise disturbance would occur during construction. Maintenance activities during project operation would cause localized disturbance at the reservoir site. Disturbance levels are currently low, because the Decker Canyon site does not provide trail access. Maintenance activities could represent a small incremental increase in disturbance. The co-applicants would use helicopters to maintain the transmission line, which could cause temporary, localized disturbance near some riparian areas.

Effects on Song Sparrow Habitat and/or Population Trends

Construction of a reservoir at either Morrell Canyon or Decker Canyon would reduce available habitat for song sparrows. Effects would be greater at Morrell Canyon, which carries more water and supports more hydrophytic vegetation than Decker Canyon. Construction at either site could contribute to downward trends in song sparrow populations, which the LMP describes as significantly negative on National Forest System lands, and slightly downward (but insignificant) on non-National Forest System lands.

Construction of transmission towers and access roads is anticipated to avoid riparian habitat, for the most part. If located in riparian habitats, temporary access roads could increase the risk of erosion during construction. Implementation of best management practices would reduce the potential for adverse effects on streambank stability.

If located in riparian habitats, temporary access roads could increase the risk of disturbance and habitat damage during project operation, unless public access is controlled. Implementation of weed management and road management plans would reduce the potential for adverse effects.

4.5 California Spotted Owl

The California spotted owl is an MIS for montane conifer forest habitat (USFS, 2005a). The Cleveland National Forest anticipates that monitoring for this species would provide information about whether USFS management is maintaining enough mature, large-diameter, high-canopy cover stands with densely shaded understories to provide sufficient habitat for interior forest species. The USFS management goal for this species is to maintain/increase numbers and distribution (USFS, 2005a).

4.5.1 Environmental Baseline

California spotted owls in the Santa Ana Mountains, and in other southern California forests, are clustered in islands of suitable habitat, surrounded by habitat that is not suitable (USFS, 2005b). The LMP indicates that in southern California, owls may use home ranges as small as 98 to 243 acres when they are located in riparian/hardwood forests, because they use narrow stringers of dense forest along steep canyons in areas otherwise dominated by chaparral (USFS, 2005b). Small oak stands may also serve as important stepping stones in dispersal.

As of 1992, surveys confirmed 114 pairs in the San Bernardino Mountains, the largest subpopulation in southern California, and 11 in the Santa Ana Mountains (Beck and Gould, 1992). The results of a 2003 report on range-wide population trends were inconclusive, but USFS (2005b) indicates there is a high risk that the southern California metapopulation will go extinct within the next 30 to 40 years.

Effects of the Proposed Action on California Spotted Owl Habitat

Construction of an upper reservoir at Morrell Canyon would convert about 20 acres of oak woodland to project use.

Tower construction could affect some owl habitat, but towers generally would be sited along ridgelines and at the tops of slopes, rather than in canyon draws that might support riparian forest. Locations of any access roads that may be constructed are not known at this point in the design process. Temporary access roads would presumably also avoid steep canyon draws and riparian habitat, and should not affect owl habitat during either construction or operation.

Construction of the underground transmission line segment and the permanent maintenance road alongside it would be located primarily in chaparral and would not affect owl habitat.

Noise disturbance during construction or operation would be unlikely, because the closest documented owl site is located about 2 miles from the proposed transmission alignment.

Effects of the Staff Alternative on California Spotted Owl Habitat

Construction of an upper reservoir at Decker Canyon would convert about 5 acres of oak woodland to project use.

Tower construction could affect some owl habitat, but towers generally would be sited along ridgelines and at the tops of slopes, rather than in canyon draws that might support riparian forest.

Construction of the underground transmission line segment and the permanent maintenance road alongside it would be located primarily in chaparral and would not affect owl habitat. Locations of any access roads that may be constructed are not known at this point in the design process. Temporary access roads would presumably also avoid steep canyon draws and riparian habitat, and should not affect owl habitat during either construction or operation.

Noise disturbance would be unlikely during project construction or operation, because the closest documented owl site is located about 2 miles from the staff alternative transmission alignment.

Effects on California Spotted Owl Habitat and/or Population Trends

The loss of oak woodland habitat at Morrell Canyon or Decker Canyon would contribute to downward habitat trends for the California spotted owl in southern California. Effects associated with Morrell Canyon would be more substantial than those that would occur at Decker Canyon, due to the loss of more oak woodland that could serve as a stepping stone for owl dispersal. USFS assigns the highest habitat value rating to coast live oak forest with 80 to 100 percent canopy cover (USFS, 2005b).

No California spotted owls are known to be present in any areas that would be affected by project construction, and no direct loss of nest sites, pairs or individuals would be expected. However, loss of habitat at either Morrell or Decker Canyon would likely contribute to downward trends in population and further impede recovery of populations in the Santa Ana Mountains.

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