



CalPeco 625 and 650 Electrical Line Upgrade Project

Riparian Conservation Objective Analysis

PREPARED FOR:

United States Department of Agriculture, Forest Service
Lake Tahoe Basin Management Unit
35 College Drive
South Lake Tahoe, CA 96150

and

United States Department of Agriculture, Forest Service
Tahoe National Forest
10811 Stockrest Springs Road
Truckee, CA 96161

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**USDA Forest Service
Lake Tahoe Basin Management Unit
and
Tahoe National Forest**

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ACRONYMS AND ABBREVIATIONS

| | |
|---------|---|
| AMS | Aquatic Management Strategy |
| APM | applicant proposed measure |
| BMP | best management practice |
| CalPeco | California Pacific Electric Company |
| CAR | Critical Aquatic Refuge |
| CDFW | California Department of Fish and Wildlife |
| CWD | coarse large woody debris |
| LCT | Lahontan cutthroat trout |
| NFS | National Forest System |
| RCAs | Riparian Conservation Areas |
| RCO | Riparian Conservation Objective |
| ROD | Record of Decision |
| SEZ | Stream Environment Zone |
| SNFPA | Sierra Nevada Forest Plan Amendment |
| SPCC | Spill Prevention, Control, and Countermeasure |
| SWPPP | Stormwater Pollution Prevention Plan |
| TRPA | Tahoe Regional Planning Agency |
| TMDLs | Total Maximum Daily Loads |
| VQO | Visual Quality Objective |

INTRODUCTION

The Sierra Nevada Forest Plan Amendment (SNFPA), Final Supplemental Environmental Impact Statement (FSEIS), Record of Decision (ROD) (USDA Forest Service 2004) requires that a site-specific project-level analysis be conducted to determine whether activities proposed within Riparian Conservation Areas (RCAs) meet the Riparian Conservation Objectives (RCOs). This analysis examines how well the alternatives being considered for the CalPeco 625 and 650 Electrical Line Upgrade Project meet the RCOs. This document presents the results of the RCO analysis for the CalPeco project.

RIPARIAN CONSERVATION AREAS

As defined in the SNFPAROD, riparian conservation areas (RCAs) “are land allocations that are managed to maintain or restore the structure and function of aquatic, riparian, and meadow ecosystems. The intent of management direction for RCAs is to (1) preserve, enhance, and restore habitat for riparian- and aquatic-dependent species, (2) ensure that water quality is maintained or restored, (3) enhance habitat conservation for species associated with the transition zone between upslope and riparian areas, and (4) provide greater connectivity within the watershed.” RCAs are delineated and managed consistent with the RCOs defined in the ROD.

RCA widths vary depending on the type of water body. The types of water bodies are designated as follows: (1) perennial streams; (2) seasonally flowing streams (includes ephemerals with defined stream channel or evidence of scour); (3) streams in inner gorge; (4) special aquatic features (lakes, meadows, bogs, fens, wetlands, vernal pools, and springs); and (5) other hydrologic or topographic depressions without a defined channel. The SNFPA ROD defines RCA widths as follows (USDA Forest Service 2004):

| Stream Type | Width of the Riparian Conservation Area |
|--|--|
| Perennial Streams | 300 feet measured from bank full edge |
| Seasonal Flowing Streams | 150 feet measured from bank full edge |
| Streams In Inner Gorge | Top of inner gorge if beyond 300 feet |
| Special Aquatic Features: Lakes, Meadows, Springs, and Ponds | 300 feet from edge of feature or riparian vegetation, whichever is greater |

ANALYSIS OF PROPOSED ACTIVITIES WITHIN RCAS

Per Standard and Guideline #94 of the SNFPA (USDA Forest Service 2004), “As part of project-level analysis, conduct peer reviews for projects that propose ground-disturbing activities in more than 25 percent of the RCA or more than 15 percent of a Critical Aquatic Refuge (CAR).”

Implementing the project would result in “Ground disturbing activities,” which are defined in the ROD as “activities that result in detrimental soil compaction or loss of organic matter beyond the thresholds identified in the soil quality standards.” There are no CARs in the project area, but creation of new access ways, necessary improvements to existing roads for project construction, and pole installation would involve vegetation clearing and grading within RCAs on a limited basis. These project activities would create ground disturbance within RCAs. Table 1 (below) summarizes and compares the acreage of potential ground disturbance within RCAs for the permanent and temporary impact zone of each action alternative. Permanent and temporary acreage was calculated based on the 40-foot-wide permanent electric line ROW that would remain following project

completion plus new and improved access roads. Additional temporary effect is the maximum amount required for temporary construction activities and is based on a 65-foot-wide construction corridor minus the 40-foot-wide permanent maintenance ROW. Because the construction corridor would be reduced in sensitive habitat areas and Applicant Proposed Measures (APMs) would be integrated into project design to avoid and minimize impacts to these areas, the values shown in Table 1 are considered a maximum and likely overstate the area of actual impacts. The project area shown in Table 1 is the project study corridor which extends 100 feet from the centerline of project components.

| Table 1 Project Disturbance Within Riparian Conservation Areas | | | | | | | | | | |
|---|-----------------|-------|----------------------|-------|--------------------------|-------|---|-------|----------------------|-------|
| Forest | PEA Alternative | | Modified Alternative | | Road Focused Alternative | | Road Focused Alternative with Double Circuit Option | | Proposed Alternative | |
| | Perm | Temp | Perm | Temp | Perm | Temp | Perm | Temp | Perm | Temp |
| LTBMU | | | | | | | | | | |
| Disturbance | 27.20 | 13.55 | 27.72 | 10.73 | 19.92 | 13.25 | 17.45 | 13.08 | 19.80 | 13.37 |
| % of forest project area RCA | 12.1% | 6.0% | 12.4% | 4.8% | 8.9% | 5.9% | 7.8% | 5.8% | 8.8% | 6.0% |
| Tahoe NF | | | | | | | | | | |
| Disturbance | 4.66 | 1.97 | 2.84 | 1.10 | 2.14 | 1.88 | 2.14 | 1.88 | 3.36 | 2.65 |
| % of forest project area RCA | 11.7% | 5.0% | 7.1% | 2.8% | 5.4% | 4.7% | 5.4% | 4.7% | 8.5% | 6.7% |
| Totals | | | | | | | | | | |
| <i>Disturbance</i> | 31.86 | 15.52 | 30.56 | 11.83 | 22.06 | 15.13 | 19.59 | 14.96 | 23.16 | 16.02 |
| <i>% of total project area RCA</i> | 12.1% | 5.9% | 11.6% | 4.5% | 8.4% | 5.7% | 7.4% | 5.7% | 8.8% | 6.1% |

The project area contains 224.3 acres of RCA within the LTBMU and 39.7 acres of RCA within the TNF. As shown in Table 1, the maximum amount of permanent ground disturbance (under the PEA Alternative) would amount to approximately 12 percent (31.86 acres) of the RCA lands within the project area. As previously stated, this figure is conservative and would be minimized through implementation of the APMs, Best Management Practices (BMPs), and mitigation measures described in the EIS/EIS/EIR prepared for the project (refer to Impact 4.7-2). Because ground disturbance in RCAs would not exceed the 25 percent threshold described in the Standards and Guidelines, peer review is not required.

RIPARIAN CONSERVATION OBJECTIVES

The ROD defines the standards and guidelines that address the types of management activities that are allowed in RCAs. RCOs provide a checklist for evaluating whether a proposed activity is consistent with the desired conditions described in the Aquatic Management Strategy (AMS). For projects that include proposed activities within RCAs all applicable RCOs and their associated standards and guidelines must be analyzed. Applicable objectives, including standards and guidelines, and a discussion of how they are met by the proposed project follow.

RIPARIAN CONSERVATION OBJECTIVE #1

Ensure that identified beneficial uses for the water body are adequately protected. Identify the specific beneficial uses for the project area, water quality goals from the Regional Basin Plan, and the manner in which the standards

and guidelines will protect the beneficial uses. (RCO #1 is linked to the following AMS goals: #1, Water Quality; #2, Species Viability; and #7, Watershed Condition.)

The project lies within the North Tahoe and Truckee River Hydrologic Areas (Hydrologic Unit numbers 634.20 and 635.20). Drainage features in the project area include the Truckee River, Griff Creek, Martis Creek, and Burton Creek. There are also minor surface waters and minor wetlands in the project area within each of these hydrologic areas. Beneficial uses designated by the Lahontan Regional Water Quality Control Board (Regional Board) for surface waters in the project area are listed in Table 2.

| Hydrologic Unit/Drainage Feature | Beneficial Uses | | | | | | | | | | | | | | | | |
|----------------------------------|-----------------|-----|-----|-----|------|-----|-------|-------|------|------|------|------|------|------|------|-----|-----|
| | MUN | AGR | IND | GWR | FRSH | POW | REC-1 | REC-2 | COMM | COLD | WILD | BIOL | RARE | MIGR | SPWN | WQE | FLD |
| Truckee River | X | X | X | X | X | X | X | X | X | X | X | | X | X | X | | |
| Martis Creek | X | X | | X | | | X | X | X | X | X | | X | X | X | | |
| Burton Creek | X | | | X | | | X | X | X | X | X | | | | X | | |
| Griff Creek | X | | | X | | | X | X | X | X | X | | | | X | | |
| Minor Surface Waters | X | X | | X | X | | X | X | X | X | X | | X | | X | | |
| Minor Wetlands | X | X | | X | X | | X | X | X | X | X | X | X | X | X | X | X |

¹ Beneficial uses also apply to all tributaries to surface waters identified in this table.
Beneficial Use Abbreviations:
MUN – Municipal and Domestic Supply COMM – Commercial and Sportfishing
AGR – Agricultural Supply COLD – Cold Freshwater Habitat
IND – Industrial Service Supply WILD – Wildlife Habitat
GWR – Groundwater Recharge POW – Hydropower Generation
FRSH – Freshwater Replenishment MIGR – Migration of Aquatic Organisms
REC-1 – Water Contact Recreation WQE – Water Quality Enhancement
REC-2 – Noncontact Water Recreation
BIOL – Preservation of Biological Habitats of Special Significance
RARE – Rare, Threatened, or Endangered Species
SPWN – Spawning, Reproduction, and Development
FLD – Flood Peak Attenuation/Floodwater Storage
Source: California Regional Water Quality Control Board, Lahontan Region 1995 plus amendments through 2005

The proposed project could potentially result in increased sedimentation, turbidity, and temperature in the surface waters described above. However, with implementation of the required BMPs and APMs, the project would have little effect on beneficial uses of water.

The State Water Resource Control Board and Regional Board entered into an agreement with the U.S. Forest Service that requires the agency to control non-point source discharges by implementing control actions certified by the State Water Resource Control Board as BMPs. BMPs are defined under the Federal Code of Regulations (40 CFR Section 103.2 [m]) as follows:

“methods, measures, or practices selected by an agency to meet its nonpoint source control needs. BMPs include but are not limited to structural and nonstructural controls and operation and maintenance procedures. BMPs can be applied before, during and after pollution producing activities to reduce or eliminate the introduction of pollutants into receiving waters”

Implementation of the proposed project would require receipt of a special use permit from the U.S. Forest Service which would describe erosion control and sediment transport BMPs in accordance with the *USDA Water Quality Management for Forest System Lands in California – Best Management Practices*. The Forest Hydrologist or Soil Scientist may prescribe any or all of the erosion control measures outlined in the above mentioned

document as appropriate on a site-specific basis. The following are examples of commonly required U.S. Forest Service water quality BMPs:

1. All proposed roads, trails, and trenches will be staked on the ground and approved by the Forest Service prior to construction.
2. Erosion problems attributed to construction or maintenance of existing lines will be resolved as soon as possible and subsequent follow-up action initiated as needed to prevent or correct erosion or sediment transport off the site.
3. Temporary roads and/or cleared right-of-way routes used for access will be decompacted, seeded, mulched, and barricaded immediately after they have served their intended purposes unless otherwise approved by the Forest Service. Water bars shall be installed on rights of way or temporary roads at appropriate intervals dependent on slope.
4. Areas of soil disturbance favorable to revegetation on which ground cover has been destroyed will be revegetated using approved seeds when deemed necessary by the Forest Service. This determination will be made on an area or project basis.
5. Operations outside of the normal operating period (over snow) may be approved when conditions allow and appropriate regulatory permits are in place. Conditions must be adequate to prevent erosion, sediment delivery to water bodies, and soil compaction.
6. Damage to springs, streams, seeps, fens, and aspen stands is a concern. When access roads or projects affect the drainage or result in sedimentation of these sensitive areas, mitigation may be necessary or maintenance/project work may need to be scheduled appropriately to minimize potential damage. Consultation with the Forest Service in advance of any project is necessary for work in these areas.

Applicant Proposed Measures incorporated into the project design, include implementing BMPs and obtaining required permits from regulatory agencies prior to commencing work in waters of the U.S. or waters of the state (see APM WQ-8 and APM BIO-1, below). The majority of the project on National Forest System (NFS) lands is also within the jurisdictional boundaries of the Tahoe Regional Planning Agency (TRPA). Therefore, the project would be subject to joint regulation by the TRPA and Regional Board for water quality issues, in addition to Forest Service regulation on NFS lands. As such, the project would be required to implement BMPs presented in the *Water Quality Management Plan for the Lake Tahoe Region* (TRPA 1988), referred to as the 208 Plan, and the *Water Quality Control Plan for the North Lahontan Basin* (CRWQCB 1995), referred to as the Basin Plan, as a condition of project approvals. The Basin Plan was updated and adopted by TRPA as part of the Regional Plan Update in December 2012 (TRPA 2012a). The updated 208 Plan was approved by the U.S. Environmental Protection Agency on June 19, 2013. The project would be required to comply with Basin Plan water quality standards to control point and nonpoint sources of pollution, and within TRPA jurisdictional boundaries, would also have to be consistent with the goals, policies, and threshold standards provided in the TRPA Regional Plan Update (TRPA 2012a), Threshold Evaluation Report (TRPA 2012b), and Code of Ordinances (TRPA 2012c), including the revised *Lake Tahoe Water Quality Management Plan* (Appendix H of the Regional Plan Update, TRPA 2012a). Additionally, it is expected that all waters in the project area would qualify as waters of the U.S. subject to regulation under Sections 401 and 404 of the Clean Water Act. Obtaining required permits and authorization from TRPA and the Regional Board and implementing all permit conditions in compliance with the Clean Water Act and State water quality standards, would ensure beneficial uses of surface waters are not adversely affected by project construction.

Relevant Applicant Proposed Measures

- ▲ **WQ-2:** All concrete washouts will be conducted either into excavations where the concrete was poured, within designated concrete washout areas, or will be captured using a washout-recycling system. Crews will not be allowed to dispose of concrete directly onto the ground.
- ▲ **WQ-3:** Where feasible (e.g., landowner approval is provided, sufficient space with permeable surfaces is available, slopes are gentle enough to allow control of potential sediment transport), all stormwater or groundwater removed from excavations will be discharged overland into well-vegetated areas to promote the settling of sediment. If overland discharge is not possible, then water removed from excavations will be collected, treated, and disposed of consistent with requirements of the Lahontan Regional Water Quality Control Board and any other agencies with jurisdiction over the activity.
- ▲ **WQ-4:** When working near aquatic resources, poles and trees will be cut by hand and felled away from such features (unless there is an ecological reason to do otherwise that is approved by applicable regulatory agencies, such as adding coarse woody debris to a stream to enhance fish habitat). The skidding of poles and trees through aquatic resources will not be permitted. Within Stream Environment Zones (SEZs) poles and trees will be removed by hand, by cable system, or by helicopter. No mastication will occur in SEZs and no chip material will be left in SEZs unless approved for erosion control. Vehicles and equipment will be staged away from aquatic features, along designated access routes or within staging areas. If there are circumstances where disturbance to the bank or channel of an aquatic feature is unavoidable, CalPeco will restore the banks and channels to preconstruction conditions immediately afterwards. An environmental monitor will be present in all instances where disturbance to an aquatic feature may occur to ensure conditions of this APM and any other applicable APMs, permit conditions, and mitigation measures are complied with.
- ▲ **WQ-8:** CalPeco will obtain permits from appropriate regulatory agencies prior to commencing work in waters of the United States or waters of the state. Following construction, CalPeco will restore any impacted waterbodies and wetlands to pre-project conditions and compensate for any permanent wetland impacts in accordance with the US Army Corps of Engineer's "no net loss" policy.
- ▲ **BIO-1:** Prior to construction, all CalPeco, contractor, and subcontractor project personnel will receive training from a qualified resource specialist regarding the appropriate work practices necessary to effectively implement the APMs and to comply with the applicable environmental laws and regulations, including appropriate wildlife avoidance measures, impact minimization procedures, the importance of sensitive resources, and the purpose and methods for protecting such resources. Among other topics, the training will also include a discussion of BMPs to reduce the potential for erosion and sedimentation during construction. Additionally, CalPeco and designated environmental monitors for project construction will coordinate with the applicable public land owners/managers on communication, documentation and reporting, and data submittal protocols.
- ▲ **BIO-27:** Helicopters will be used, where necessary, to avoid impacts to waterways or in areas of rough terrain. Appropriate measures, including regular watering, will be implemented at landing zones in order to control dust. Helicopter use within HRCAs, PACs, and TRPA disturbance zones will be prohibited if vegetation treatment restrictions are concurrently in place.
- ▲ **BIO-29:** Skidding of trees will not be permitted in waters of the United States or waters of the State, including wetlands. Within these waters tree removal may be conducted by hand, use of cable systems, helicopter yarding, or use of ground based equipment when determined suitable for ground based mechanical harvest. Any work conducted in the vicinity of waters of the United States, waters of the State, and wetlands will have an environmental monitor present, consistent with the requirements of APM WQ-4. Other APMs applicable to the protection of aquatic resources will also be implemented.
- ▲ **BIO-36:** Prior to construction, CalPeco will develop a Restoration Plan that will address final clean-up, stabilization, and revegetation procedures for areas disturbed by the project. The plan will be consistent with, and implement related commitments and requirements included in the EIS/EIS/EIR project description, other APMs, mitigation measures, and agency permit requirements. The Restoration Plan will address

loosening of any compacted soil, restoration of surface residue, and reseeded. If existing unpaved roads require modification to temporarily allow passage of construction equipment during the construction period, these roads will be returned to their original footprint after construction is complete. On NFS lands, restoration activities will be designed and implemented to meet invasive plant management guidelines and Visual Quality Objectives (VQO) for the area. Areas temporarily disturbed by cut and fill activities will be regraded to blend with the natural topography. On public land, CalPeco will coordinate with the land management agency to determine an appropriate seed mix or tree planting plan as well as other elements of the plan applicable to lands managed by the agency. On private land, CalPeco will coordinate with the landowner and/or provide the landowner with a suggested seed mix based on consultation with the agency of jurisdiction. The plan will include approved seed mixes, application rates, application methods, methods to record pre-disturbance conditions, success criteria for vegetation growth, monitoring and reporting protocols, and remedial measures if success criteria are not met. If broadcast seeding is determined to be the most feasible application method, seeding rates will be doubled relative to the standard seeding rate and the seeding method rationale will be explained. The plan will also include long-term erosion and sediment control measures, slope stabilization measures, criteria to determine the success of these measures, remedial actions if success criteria are not met, and monitoring and reporting procedures. As part of normal equipment inspections during project operation, an evaluation of access ways will be conducted to confirm that use has not resulted in compaction that will result in "coverage" per TRPA standards.

Other applicable APMs for meeting RCO #1 are described below under each associated standard and guideline.

Standards and Guidelines Associated with RCO #1:

95. *For waters designated as "Water Quality Limited" (Clean Water Act Section 303[d]), participate in the development of Total Maximum Daily Loads (TMDLs) and TMDL Implementation Plans. Execute applicable elements of completed TMDL Implementation Plans.*

Lake Tahoe and the Truckee River are designated as "Water Quality Limited" and are subject to TMDL Implementation Plans. As discussed above, the project would implement standard water quality BMPs consistent with required permits. Obtaining required permits and authorization from TRPA and the Regional Board and implementing all permit conditions in compliance with the Clean Water Act and State water quality standards, would ensure consistency with applicable elements of the TMDL Implementation Plans for these waters.

96. *Ensure that management activities do not adversely affect water temperatures necessary for local aquatic- and riparian-dependent species assemblages.*

Shade and temperature are not key habitat elements for many of the seasonal drainages within the project area because these habitats are ephemeral and do not contain water long enough for shade and stream temperature to be a factor. Shade and temperature are regulated by tree and shrub cover and are important habitat elements on the Truckee River, Burton Creek, Martis Creek, and Griff Creek (the perennial streams in the project area). As described under impact 4.7-7 in the EIS/EIS/EIR, some clearing of trees and woody riparian vegetation along stream channels may be required to provide adequate clearance for construction activities. The following APMs would be implemented in addition to those listed above for general consistency with RCO #1, to minimize the risk of adversely affecting water temperatures in project streams:

- ▲ **BIO-21:** Qualified environmental monitors will be present with each crew during all vegetation-removal activities to help ensure that impacts to biological resources are minimized to the extent possible. For all other construction activities, monitors will be allowed to cover up to 5 miles of the project area at once to allow multiple crews to work in close proximity to each other at the same time. Environmental monitors will have the authority to stop work or direct work in order to help ensure the protection of resources and compliance with all permits.

- ▲ **BIO-28:** CalPeco will minimize vegetation and tree removal to only the areas necessary for construction, with particular attention given to minimizing effects on riparian areas and preserving trees greater than 30 inches diameter at breast height (dbh).

The project design including incorporation of the APMs would reduce potential project impacts to aquatic resources, and most potential residual impacts to aquatic habitat functions would not be considered substantial. Despite this, the project may result in disturbance requiring a California Department of Fish and Wildlife (CDFW) Streambed Alteration Agreement, which would be considered a potentially significant impact. Therefore, in addition to the above APMs, Mitigation Measures 4.7-2a (Alt. 1) and 4.7-2b (Alt 1) as described in the EIS/EIS/EIR, would be implemented to avoid or compensate for the loss or degradation of stream or riparian habitat, ensure consistency with CDFW Code requirements, and further reduce potential adverse effects on riparian habitats.

Mitigation Measure 4.7-2A: The following measures would be implemented to avoid or compensate for the loss or degradation of stream or riparian habitat, ensure consistency with Fish and Game Code Section 1602, and further reduce potential adverse effects on riparian habitats:

- ▲ CalPeco shall compensate for permanent riparian habitat impacts at a minimum of a 1:1 ratio through contributions to a CDFW approved wetland mitigation bank or through the development and implementation of a Compensatory Stream and Riparian Mitigation and Monitoring Plan aimed at creating or restoring in-kind habitat in the surrounding area. If mitigation credits are not available, stream and riparian habitat compensation shall include establishment of riparian vegetation on currently unvegetated bank portions of streams affected by the project and enhancement of existing riparian habitat through removal of nonnative species, where appropriate, and planting additional native riparian plants to increase cover, continuity, and width of the existing riparian corridor along streams in the project site and surrounding areas. Construction activities and compensatory mitigation shall be conducted in accordance with the terms of a streambed alteration agreement as required under Section 1602 of the Fish and Game Code.
- ▲ The Compensatory Stream and Riparian Mitigation and Monitoring Plan shall include the following:
 - /// identification of compensatory mitigation sites and criteria for selecting these mitigation sites;
 - /// in kind reference habitats for comparison with compensatory riparian habitats (using performance and success criteria) to document success;
 - /// monitoring protocol, including schedule and annual report requirements (Compensatory habitat shall be monitored for a minimum of five years from completion of mitigation, or human intervention (including recontouring and grading), or until the success criteria identified in the approved mitigation plan have been met, whichever is longer);
 - /// ecological performance standards, based on the best available science and including specifications for native riparian plant densities, species composition, amount of dead woody vegetation gaps and bare ground, and survivorship; at a minimum, compensatory mitigation planting sites must achieve 80 percent survival of planted riparian trees and shrubs by the end of the five-year maintenance and monitoring period or dead and dying trees shall be replaced and monitoring continued until 80 percent survivorship is achieved;
 - /// corrective measures if performance standards are not met;
 - /// responsible parties for monitoring and preparing reports; and
 - /// responsible parties for receiving and reviewing reports and for verifying success or prescribing implementation or corrective actions.

Mitigation Measure 4.7-2b: The following measures would be implemented to ensure consistency with TRPA Code Section 61.3 and Fish and Game Code Section 1602 and further reduce potential adverse effects on SEZs, streams, and riparian habitat:

- ▲ Within the Tahoe Basin, all reasonable alternatives, including bridge spans, pole spans, and facility relocation; shall be implemented to avoid or reduce the extent of encroachment into SEZs.
- ▲ In instances where there is no feasible alternative to avoid an SEZ, CalPeco shall mitigate all impacts within the boundaries of SEZs by restoring SEZ habitat (land capability district 1b) in the surrounding area, or other appropriate area as determined by TRPA, at a minimum ratio of 1.5:1, consistent with TRPA Code.
- ▲ CalPeco shall retain a qualified restoration ecologist to prepare a restoration plan (see APM BIO-36) that will address final clean-up, stabilization, and revegetation procedures for areas disturbed by the project. The restoration plan for SEZs shall include the following:
 - /// identification of compensatory mitigation sites and criteria for selecting these mitigation sites;
 - /// complete assessment of the existing biological resources in the restoration areas;
 - /// in kind reference habitats for comparison with compensatory SEZs (using performance and success criteria) to document success;
 - /// monitoring protocol, including schedule and annual report requirements (Compensatory habitat shall be monitored for a minimum of five years from completion of mitigation, or human intervention (including recontouring and grading), or until the success criteria identified in the approved mitigation plan have been met, whichever is longer);
 - /// ecological performance standards, based on the best available science and including specifications for native plant densities, species composition, amount of dead woody vegetation gaps and bare ground, and survivorship; at a minimum, compensatory mitigation planting sites must achieve 80 percent survival of planted vegetation by the end of the five-year maintenance and monitoring period or dead and dying plants shall be replaced and monitoring continued until 80percent survivorship is achieved;
 - /// corrective measures if performance standards are not met;
 - /// responsible parties for monitoring and preparing reports; and
 - /// responsible parties for receiving and reviewing reports and for verifying success or prescribing implementation or corrective actions.

The project APMs would minimize the amount of vegetation removal, would require a Restoration Plan with a tree planting strategy approved by the U.S. Forest Service, and mitigation would be provided for any permanent loss of riparian habitat. For these reasons, removal of trees and riparian vegetation resulting from implementation of the proposed project would not adversely affect water temperatures necessary for local aquatic- and riparian-dependent species assemblages.

97. *Limit pesticide applications to cases where project level analysis indicates that pesticide applications are consistent with riparian objectives. Prohibit application of pesticides to livestock in RCAs.*

Use of pesticides is not proposed as part of the project.

98. *Avoid pesticide applications within 500 feet of known occupied sites for the California red-legged frog, Cascade frog, Yosemite toad, foothill yellow-legged frog, mountain yellow-legged frog, and*

northern leopard frog unless environmental analysis documents that pesticides are needed to restore or enhance habitat for these amphibian species.

Use of pesticides is not proposed as a project activity and there are no known occupied sites for California red-legged frog, Cascade frog, Yosemite toad, foothill yellow-legged frog, Sierra Nevada yellow-legged frog, and northern leopard frog within 500 feet of proposed project activities.

99. *Prohibit storage of fuels and other toxic materials within RCAs except at designated administrative sites and sites covered by a Special Use Authorization. Prohibit refueling within RCAs unless there are no other alternatives. Ensure that spill plans are reviewed and up-to-date.*

As a condition of obtaining required permits and authorizations from the Regional Board and TRPA in accordance with APM WQ-8, CalPeco would be required to develop a Stormwater Pollution Prevention Plan (SWPPP) and a Spill Prevention, Control, and Countermeasure Plan. In addition, the following APM would be implemented to address fueling:

- ▲ **WQ-1:** All refueling will be conducted at least 100 feet away from waterways, within designated refueling stations. If refueling within 100 feet of a waterway or RCA is unavoidable, CalPeco will require that spill kits are on site, install secondary containment to control accidental spills, and notify an environmental monitor prior to fueling. Environmental monitors will regularly inspect refueling areas to help ensure that proper measures are being implemented in accordance with the project's SWPPP and Spill Prevention, Control and Countermeasure (SPCC) Plan.

RIPARIAN CONSERVATION OBJECTIVE #2

Maintain or restore: (1) the geomorphic and biological characteristics of special aquatic features, including lakes, meadows, bogs, fens, wetlands, vernal pools, springs; (2) streams, including in stream flows; and (3) hydrologic connectivity both within and between watersheds to provide for the habitat needs of aquatic-dependent species. (RCO #2 is linked to the following AMS goals: #2, Species Viability; #3, Plant and Animal Community Diversity; #4, Species Habitats; #5, Watershed Connectivity; #6, Floodplains and Water Tables; #8, Streamflow Patterns and Sediment Regimes; and #9, Streambanks and Shorelines.)

Standards and Guidelines Associated with RCO #2:

100. *Maintain and restore the hydrologic connectivity of streams, meadows, wetlands, and other special aquatic features by identifying roads and trails that intercept, divert, or disrupt natural surface and subsurface water flow paths. Implement corrective actions where necessary to restore connectivity.*

Implementing the following APMs would ensure hydrologic connectivity of streams in the project area is not adversely affected by the construction or use of project access ways and improved roads:

- ▲ **BIO-27:** Helicopters will be used, where necessary, to avoid impacts to waterways or in areas of rough terrain. Appropriate measures, including regular watering, will be implemented at landing zones in order to control dust. Helicopter use within HRCAs, PACs, and TRPA disturbance zones will be prohibited if vegetation treatment restrictions are concurrently in place.
- ▲ **WQ-5:** When construction activities are required adjacent to flowing streams or rivers, work will be conducted during low-flow conditions (i.e., when surface flow is restricted to the low-flow channel, as confirmed by the environmental monitor).

- ▲ **WQ-6:** In areas where topsoil has not been salvaged, construction activities will be limited when the environmental monitor determines that the soil is too wet to adequately support vehicles and equipment. Where soil conditions are deemed too wet to work, one of the following measures will apply.
 - // Access will be limited to the minimum area feasible for construction. Where possible, vehicles and equipment will be routed around wet areas so long as the re-route does not cross into sensitive resource areas.
 - // If wet areas cannot be avoided and soil moisture is too high to strip topsoil, BMPs, including the use of wide-track or low ground pressure equipment or installation of prefabricated equipment pads or timber mats, will be implemented for use in these areas to minimize rutting and off-site sedimentation.
- ▲ **WQ-7:** CalPeco will minimize vehicle and equipment usage within and crossing of stream channels and other aquatic resources consistent with the requirements of other APMs. If vehicles and equipment must cross stream channels or other aquatic resources, CalPeco will construct shoo-fly access roads, install culvert crossings, or use other methods to access either side of the resource or utilize existing bridges, where feasible, in order to minimize the need to install temporary bridges. Limit crossings to no more than one for every 800 feet of channel. If there are no existing crossings and the construction of shoo-fly roads or other crossing methods may cause greater resource impact, CalPeco will install timber mats, slash mats, or other materials suitable for a temporary bridge. If bridges are installed over streams with discernible flow, all attempts will be made to span the channel. Temporary crossings on ephemeral or intermittent drainages will be constructed and removed, to the maximum extent feasible, when the channels are dry and will be removed before the winter season begins. These crossings will be designed to not obstruct water flow and fish passage and to accommodate flows from a 1 inch or greater precipitation event.

101. *Ensure that culverts or other stream crossings do not create barriers to upstream or downstream passage for aquatic-dependent species. Locate water-drafting sites to avoid adverse effects to in-stream flows and depletion of pool habitat. Where possible, maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows, wetlands, and other special aquatic features.*

Implementing APMs BIO-1, BIO-27, BIO-36, WQ-5, WQ-6, WQ-7, and WQ-8 described above would help ensure project stream crossings do not create barriers to fish passage or result in hydromodifications.

102. *Prior to activities that could adversely affect streams, determine if relevant stream characteristics are within the range of natural variability. If characteristics are outside the range of natural variability, implement mitigation measures and short-term restoration actions needed to prevent further declines or cause an upward trend in conditions. Evaluate required long-term restoration actions and implement them according to their status among other restoration needs.*

Implementing APMs BIO-1, BIO-27, BIO-36, WQ-5, WQ-6, WQ-7, and WQ-8 described above would help ensure project impacts on streams are avoided to the extent feasible and that stream areas that cannot be avoided are restored following construction, or that the project proponent compensates for any unavoidable losses in a manner that results in no net loss of stream habitats.

103. *Prevent disturbance to meadow-associated streambanks and natural lake and pond shorelines caused by resource activities from exceeding 20 percent of stream reach or 20 percent of natural lake and pond shorelines.*

No project construction would occur on lake or pond shorelines. Implementation of the project would result in permanent loss or temporary disturbance of wetland and riparian habitat as described in Impact 4.7-2 of the EIS/EIS/EIR. In some areas this could include disturbance of meadow-associated streambanks. The percent of each stream reach (as defined by the National Hydrology Dataset (USGS 2014)) associated with an SEZ, riparian

corridor, wet meadow, or wetland within the permanent disturbance footprint of each action alternative is shown in Table 3.

| Table 3 Percent of SEZ, Riparian, Wet Meadow, or Wetland Associated Stream Reach Disturbed, by Alternative | | | | | | |
|---|-----------------------------------|----------------------------------|--------------------------|--------------------------|-----------------------------|---------------|
| Name¹ | NHD Reach Code¹ | Drainage Type¹ | Reach Length (ft) | Dist. Length (ft) | % of Reach Disturbed | Forest |
| PEA Alternative | | | | | | |
| | 16050101000551 | Intermittent | 4088 | 271 | 6.6 | LTBMU |
| Griff Creek | 16050101000085 | Perennial | 1947 | 81 | 4.2 | LTBMU |
| Burton Creek | 16050101000073 | Perennial | 1943 | 41 | 2.1 | LTBMU |
| | 16050101001463 | Ephemeral | 6181 | 71 | 1.1 | LTBMU |
| | 16050101001586 | Ephemeral | 2605 | 63 | 2.4 | LTBMU |
| | 16050101001843 | Ephemeral | 1620 | 80 | 5.0 | LTBMU |
| | 16050101001717 | Ephemeral | 3969 | 138 | 3.5 | LTBMU |
| | 16050101001329 | Ephemeral | 5077 | 40 | 0.8 | LTBMU |
| | 16050101000083 | Intermittent | 7387 | 53 | 0.7 | LTBMU |
| | 16050101008420 | | 2689 | 80 | 3.0 | LTBMU |
| Truckee River | 16050102011698 | | 2718 | 48 | 1.7 | LTBMU |
| | 16050102010568 | Stream/River | 1696 | 88 | 5.2 | TNF |
| | 16050102009144 | Stream/River | 2038 | 41 | 2.0 | TNF |
| Modified Alternative | | | | | | |
| | 16050101000551 | Intermittent | 4088 | 141 | 3.4 | LTBMU |
| Griff Creek | 16050101000085 | Perennial | 1947 | 85 | 4.3 | LTBMU |
| Burton Creek | 16050101000073 | Perennial | 1943 | 41 | 2.1 | LTBMU |
| | 16050101001463 | Ephemeral | 6181 | 118 | 1.9 | LTBMU |
| | 16050101001586 | Ephemeral | 2605 | 75 | 2.9 | LTBMU |
| | 16050101001843 | Ephemeral | 1620 | 80 | 5.0 | LTBMU |
| | 16050101001717 | Ephemeral | 3969 | 138 | 3.5 | LTBMU |
| | 16050101001329 | Ephemeral | 5077 | 65 | 1.3 | LTBMU |
| | 16050101000083 | Intermittent | 7387 | 65 | 0.9 | LTBMU |
| | 16050101008420 | | 2689 | 79 | 3.0 | LTBMU |
| Truckee River | 16050102011698 | | 2718 | 48 | 1.7 | LTBMU |
| Road Focused Alternative | | | | | | |
| | 16050101000551 | Intermittent | 4088 | 160 | 3.9 | LTBMU |
| Griff Creek | 16050101000085 | Perennial | 1947 | 85 | 4.3 | LTBMU |
| Burton Creek | 16050101000073 | Perennial | 1943 | 40 | 2.1 | LTBMU |
| | 16050101001463 | Ephemeral | 6181 | 118 | 1.9 | LTBMU |
| | 16050101001843 | Ephemeral | 1620 | 42 | 2.6 | LTBMU |

**Table 3 Percent of SEZ, Riparian, Wet Meadow, or Wetland
Associated Stream Reach Disturbed, by Alternative**

| Name ¹ | NHD Reach Code ¹ | Drainage Type ¹ | Reach Length (ft) | Dist. Length (ft) | % of Reach Disturbed | Forest |
|---|-----------------------------|----------------------------|-------------------|-------------------|----------------------|--------|
| | 16050101001717 | Ephemeral | 3969 | 74 | 1.9 | LTBMU |
| | 16050101008420 | | 2689 | 79 | 2.9 | LTBMU |
| Truckee River | 16050102011698 | | 2718 | 48 | 1.7 | LTBMU |
| Road Focused Alternative with Double Circuit Option | | | | | | |
| | 16050101000551 | Intermittent | 4088 | 160 | 3.9 | LTBMU |
| Burton Creek | 16050101000073 | Perennial | 1943 | 40 | 2.1 | LTBMU |
| | 16050101001843 | Ephemeral | 1620 | 42 | 2.6 | LTBMU |
| | 16050101001717 | Ephemeral | 3969 | 74 | 1.9 | LTBMU |
| | 16050101008420 | | 2689 | 79 | 2.9 | LTBMU |
| Truckee River | 16050102011698 | | 2718 | 48 | 1.7 | LTBMU |
| Proposed Alternative | | | | | | |
| | 16050101000551 | Intermittent | 4088 | 160 | 3.9 | LTBMU |
| Griff Creek | 16050101000085 | Perennial | 1947 | 85 | 4.3 | LTBMU |
| Burton Creek | 16050101000073 | Perennial | 1943 | 40 | 2.1 | LTBMU |
| | 16050101001463 | Ephemeral | 6181 | 118 | 1.9 | LTBMU |
| | 16050101001843 | Ephemeral | 1620 | 42 | 2.6 | LTBMU |
| | 16050101001717 | Ephemeral | 3969 | 74 | 1.9 | LTBMU |
| | 16050101008420 | | 2689 | 79 | 2.9 | LTBMU |
| Truckee River | 16050102011698 | | 2718 | 48 | 1.7 | LTBMU |
| | 16050102009144 | Stream/River | 2038 | 41 | 2.0 | TNF |
| ¹ Source: USGS.2014. National Hydrology Dataset. | | | | | | |

The action alternatives would disturb sensitive habitat associated with Griff Creek, Burton Creek, and the Truckee River. However, with the incorporation of APMs into the project, implementation of the action alternatives would not result in disturbance of more than 20 percent of any stream reach. The values for disturbance length and the portion of the Truckee River (reach 16050102011698; approximately between Fanny Bridge and the Caltrans Maintenance Yard adjacent to the 64 Acre Parcel in Tahoe City) that would be disturbed provided in Table 3 incorporate APM SCE-8 into the PEA, Modified, and Proposed Alternatives. APM SCE-8 requires that poles along the south bank of this river reach be re-located southward, outside the river corridor and behind the trees that line the riverbank such that visibility of the power line is minimized as viewed from State Route 89, the Truckee River, and the pedestrian bridge. This would reduce disturbance along the sensitive river bank. Additionally, prior to any work in areas containing potential wetlands of streams, a wetland delineation would be completed (APM BIO-30). This delineation would be used to locate poles and other facilities outside of these resources to the extent possible. Environmental monitors would be present with the crew, work areas would be staked and clearly defined, and vegetation and tree removal would be minimized (APMs BIO-21, BIO-26, and BIO-28). In situations where project work in these areas is unavoidable, protective measures would be taken to prevent soil compaction and ground disturbance (APMs BIO-27, BIO-29, BIO-30, WQ-4, WQ-5,

and WQ-7). Temporary disturbance areas would be restored as previously described in APM BIO-36 and as described in BIO-30, below.

- ▲ **BIO-30:** Prior to commencing construction in any area containing aquatic resources or potential wetlands, a qualified biologist will conduct a delineation of waters of the United States according to methods established in the USACE wetlands delineation manual (Environmental Laboratories 1987) and Western Mountains, Valleys, and Coast Region Supplement (Environmental Laboratories 2010). The delineation will map and quantify the acreage of all aquatic habitats on the project site and will be submitted to USACE for verification. CalPeco will determine, based on the verified wetland delineation and the project design plan, the acreage of impacts on waters of the United States and waters of the state that will result from project implementation. Impacts will be avoided to the extent practicable through the siting of poles and other facilities outside of delineated waters of the United States and waters of the state. Work in wetlands or wet meadow habitats with saturated soil conditions will be scheduled when soils are dry to the extent possible. If soils become saturated, timber mats will be installed along all vehicle and equipment access routes to minimize rutting. Prior to disturbance of waters of the United States or waters of the state, an environmental monitor will record via photographs and field notes the pre-disturbance condition of the water. Disturbed waters will be restored to preconstruction conditions and seeded with a native species, consistent with the vegetation community present prior to disturbance, to stabilize the soils and minimize the introduction of invasive plants, as specified by the USACE and RWQCB. In accordance with the USACE “no net loss” policy, all permanent wetland impacts will be mitigated at a minimum of a 1:1 ratio. This mitigation will come in the form of either contributions to a USACE-approved wetland mitigation bank or through the development of a Compensatory Mitigation and Monitoring Plan aimed at creating or restoring wetlands in the surrounding area (although creation is not authorized by TRPA in their jurisdiction).

In addition to the APMs, mitigation measures that would be implemented to mitigate loss or disturbance of meadow-associated stream banks include Mitigation Measure 4.7-2a and 4.7-2b (described above and in the EIS/EIS/EIR prepared for the project). Mitigation Measure 4.7-2a would compensate for loss of stream or riparian habitat at a minimum ratio of 1:1 for areas outside of the Lake Tahoe Basin. Mitigation Measure 4.7-2b requires compensation at a ratio of 1.5: 1 as required by TRPA Code Section 61.3, would apply to areas within the Lake Tahoe Basin.

105. *At either the landscape or project-scale, determine if the age class, structural diversity, composition, and cover of riparian vegetation are within the range of natural variability for the vegetative community. If conditions are outside the range of natural variability, consider implementing mitigation and/or restoration actions that will result in an upward trend. Actions could include restoration of aspen or other riparian vegetation where conifer encroachment is identified as a problem.*

Implementing APMs BIO-21, BIO-28, BIO-36, and WQ-8 described above would help ensure impacts on riparian vegetation within the project area are minimized and that riparian habitat is restored to pre-project conditions following project implementation. Post-project restoration would be coordinated with the U.S. Forest Service. Restoration actions that could result in an upward trend in riparian condition could be considered where the U.S. Forest Service has determined that pre-project conditions are outside the range of natural variability; however, improving pre-project riparian vegetation conditions is not an obligation of the project applicant, except where riparian habitat restoration or enhancement is proposed as mitigation for project impacts.

As stated above, Mitigation Measures 4.7-2a and 4.7-2b would be implemented to mitigate loss or disturbance of riparian habitat (these measures are the same as Mitigation Measures 4.7-2a and 4.7-2b in the EIS/EIS/EIR prepared for the project) and would provide an opportunity for restoration or improvement of riparian habitat.

All remaining Standards and Guidelines associated with RCO #2 are not applicable to this project.

RIPARIAN CONSERVATION OBJECTIVE #3

Ensure a renewable supply of large down logs that: (1) can reach the stream channel and (2) provide suitable habitat within and adjacent to the RCA. (RCO #3 is linked to the following AMS goals: #2, Species Viability; and #3, Plant and Animal Community Diversity.)

Standards and Guidelines Associated with RCO #3:

108. *Determine if the level of coarse large woody debris (CWD) is within the range of natural variability in terms of frequency and distribution and is sufficient to sustain stream channel physical complexity and stability. Ensure proposed management activities move conditions toward the range of natural variability.*

Implementing the proposed project would not result in a substantial change in available large down logs to any streams. Although the project would result in substantial vegetation removal (refer to Impact 4.7-1 in the EIS/EIS/EIR for a discussion of disturbance or loss of common vegetation communities), it is only a small proportion of the existing forest cover in the study area and surrounding forest. As described in APMs BIO-30 and BIO-36, a restoration plan would be developed to address final clean-up, stabilization, and revegetation procedures for areas disturbed by the project. Disturbed areas would be returned to their pre-disturbance conditions to the extent possible. This would include placement of CWD as necessary. Mitigation Measure 4.7-2b (described above) requires that for areas within the Lake Tahoe Basin, the Restoration Plan described in BIO-36 include an ecological performance standard for dead woody vegetation in SEZ areas. Additionally, implementation of the proposed project would require receipt of a special use permit from the U.S. Forest Service which could include BMPs related to placement of CWD, such as the following wildlife BMP currently included in the U.S. Forest Service CalPeco Master Permit:

“A USFS Fisheries Biologist will review the Annual Maintenance Plan for potential impacts to Lahontan cutthroat trout (LCT). The Fisheries Biologist may need to be on site during project implementation and/or provide additional site-specific design features to avoid direct or indirect impacts to LCT or Sierra Nevada yellow-legged frog or important elements (e.g. large woody debris or pools) of their habitats.”

RIPARIAN CONSERVATION OBJECTIVE #4

Ensure that management activities, including fuels reduction actions, within RCAs and CARs enhance or maintain physical and biological characteristics associated with aquatic- and riparian-dependent species. (RCO #4 is linked to the following AMS goals: #2, Species Viability; and #7, Watershed Condition.)

Physical and biological characteristics of aquatic and riparian habitats within the project area would be maintained with implementation of the APMs. All proposed actions are designed to minimize impacts to aquatic- and riparian-dependent resources.

Applicable APMs to RCO #4 include BIO-1, BIO-23, BIO-28, BIO-30, BIO-36, and WQ-8, which have been described above, and the additional APMs listed after the applicable standards and guidelines below.

Standards and Guidelines Associated with RCO #4:

110. *Use screening devices for water drafting pumps. Use pumps with low entry velocity to minimize removal of aquatic species, including juvenile fish, amphibian egg masses and tadpoles, from aquatic habitats.*

The following APMs would be implemented to ensure consistency with guideline 110:

- ▲ **BIO-17:** Concurrent with the preconstruction surveys described in APM BIO-15, surveys will be conducted for amphibians, including eggs or juveniles, at aquatic habitat crossed by the project. If adults, juveniles, or eggs of sensitive amphibians are discovered, a permitted specialist will relocate the individuals to suitable

habitat outside of the construction area. If amphibians are discovered in the construction area after the start of work, the environmental monitor will allow the individuals to leave under their own volition. As an alternative, an agency-approved biologist may relocate the individuals from the project area to similar, suitable habitat. CalPeco will coordinate with the CDFG, USFWS, USFS, and/or USACE prior to relocating any individuals. If it is determined that surveys would have potential to result in harassment or other forms of take of a federally listed species (e.g., Sierra Nevada yellow-legged frog), survey and potential relocation methods will be coordinated with and authorized by USFWS.

- ▲ **BIO-31:** Visibility permitting, all excavations will be inspected for sensitive aquatic wildlife prior to dewatering. Wildlife found in excavations will be allowed to leave passively or will be relocated by a qualified biologist.
 - ▲ **BIO-32:** If dewatering of an excavation is needed, all dewatering pump intakes will be fitted with filter screening to prevent impacts to aquatic wildlife that may accidentally enter excavations. Water will not be pumped directly from rivers, streams, ponds, or other waters of the U.S. or wetlands (although as stated above, dewatering of excavations is permitted).
113. *Allow hazard tree removal within RCAs. Allow mechanical ground disturbing fuels treatments, salvage harvest, or commercial fuelwood cutting within RCAs when the activity is consistent with RCOs. Utilize low ground pressure equipment, helicopters, over the snow logging, or other non-ground disturbing actions to operate off of existing roads when needed to achieve RCOs. Ensure that existing roads, landings, and skid trails meet Best Management Practices. Minimize the construction of new skid trails or roads for access into RCAs for fuel treatments, salvage harvest, commercial fuelwood cutting, or hazard tree removal.*

Removal of hazardous trees is a mandatory component of the project per California Public Utilities Commission (CPUC) requirements. Per APM BIO-1 and permit requirements (APM WQ-8), BMPs would be applied. Furthermore, most of the project on NFS lands is also within the jurisdictional boundaries of the TRPA. Therefore, the project would be subject to joint regulation by the TRPA and Regional Board for water quality issues, in addition to Forest Service regulation on NFS lands. As such, the project would be required to implement BMPs presented in the *Water Quality Management Plan for the Lake Tahoe Region* (TRPA 1988 and 2012a), referred to as the 208 Plan, and the *Water Quality Control Plan for the North Lahontan Basin* (CRWQCB 1995), referred to as the Basin Plan, as a condition of project approvals.

Per APM WQ-7, CalPeco will minimize vehicle and equipment use in aquatic resources and utilize existing roads to the extent feasible, utilize shoo-fly roads, and make every attempt to span stream channels if bridges are installed. Per APM Bio-27, helicopters will be used where necessary to avoid impacts to waterways.

114. *As appropriate, assess and document aquatic conditions following the Regional Stream Condition Inventory protocol prior to implementing ground disturbing activities within suitable habitat for the California red-legged frog, Cascade frog, Yosemite toad, foothill and mountain yellow-legged frogs, and northern leopard frog.*

There are no proposed ground disturbing activities within any suitable California red-legged frog, Cascade frog, Yosemite toad, foothill and Sierra Nevada yellow-legged frogs, and northern leopard frog habitat within the project area.

All remaining Standards and Guidelines associated with RCO #4 are not applicable to this project.

RIPARIAN CONSERVATION OBJECTIVE #5

Preserve, restore, or enhance special aquatic features, such as meadows, lakes, ponds, bogs, fens, and wetlands, to provide the ecological conditions and processes needed to recover or enhance the viability of species that rely on these areas. (RCO #5 is linked to the following AMS goals: #1, Water Quality; #2, Species

Viability; #3, Plant and Animal Community Diversity; #4, Special Habitats; #7, Watershed Condition; and #9, Stream Banks and Shorelines.)

APMs BIO-1, BIO-21, BIO-23, BIO-26, BIO-27, BIO-28, BIO-29, BIO-30, BIO-36, WQ-4, WQ-7, and WQ-8, described above and incorporated into project design, would ensure aquatic features, such as wet meadows, are avoided to the extent feasible and that aquatic resources that cannot be avoided are restored following construction, or if the habitat cannot be restored, that the project proponent compensates for unavoidable losses in a manner that results in no net loss of habitat values to species that rely on these habitats. The project would not affect any lakes, ponds, bogs, or fens.

Standards and Guidelines Associated with RCO #5:

*118. Prohibit or mitigate ground-disturbing activities that adversely affect hydrologic processes that maintain water flow, water quality, or water temperature critical to sustaining bog and fen ecosystems and plant species that depend on these ecosystems. During project analysis, survey, map, and develop measures to protect bogs and fens from such activities as trampling by livestock, pack stock, humans, and wheeled vehicles. Criteria for defining bogs and fens include, but not limited to, presence of: (1) sphagnum moss (*Sphagnum spp.*), (2) mosses belonging to the genus *Meessia*, and (3) sundew (*Drosera spp.*). Complete initial plant inventories of bogs and fens within active grazing allotments prior to re-issuing permits.*

There are no known bogs or fens within the project area and none were discovered during reconnaissance surveys. If any are found during project implementation, activities would be guided by the APMs as described in the above sections.

All remaining Standards and Guidelines associated with RCO #5 are not applicable to this project.

RIPARIAN CONSERVATION OBJECTIVE #6

Identify and implement restoration actions to maintain, restore or enhance water quality and maintain, restore, or enhance habitat for riparian and aquatic species. (RCO #6 is linked to all AMS goals.)

Standards and Guidelines Associated with RCO #6:

122. Recommend restoration practices in: (1) areas with compaction in excess of soil quality standards, (2) areas with lowered water tables, or (3) areas that are either actively down cutting or that have historic gullies. Identify other management practices, for example, road building, recreational use, grazing, and timber harvests, that may be contributing to the observed degradation.

Decommissioning of the existing 625 line could provide opportunities for restoration of potentially compacted soil in the riparian areas along the abandoned ROW. As described below in APM BIO-37, a qualified biologist or soil scientist will identify areas of compacted soil and will prescribe appropriate restoration measures.

- ▲ **BIO-37:** Decommissioning the existing 625 Line ROW and allowing natural regeneration of coniferous forest and other native vegetation types will assist in offsetting or reducing the permanent loss of trees and other vegetation along the new 625 Line ROW. Prior to the removal of poles and conductor, a qualified biologist or soil scientist will identify areas of the abandoned ROW that contain unnaturally compacted soil (resulting from unauthorized public use, development of user-created trails, or other factors) that could limit the natural reestablishment of vegetation and assess whether local treatments will be needed to facilitate native vegetation recruitment and development. CalPeco will consult with the applicable land owner/manager to verify that areas identified for treatments are appropriate (e.g., not part of a system road, authorized trail network, or other desired use) and secure approval for restoration. Restoration of these sites will be overseen by a qualified biologist and will likely consist of a combination of the following.

- /// Barricade existing access points and post appropriate signage to discourage use. Also incorporate into restoration actions minimizing the visibility of potential access points from intersecting roadways.
- /// Loosen compacted soil to a depth of 6 to 8 inches.
- /// Incorporate logs, boulders, mulch and other materials into the disturbed area to discourage use.
- /// Apply appropriate erosion control BMPs (e.g., installation of check dams, mulch, log and/or rock stabilization) in areas where evidence of sheet, rill, or gully erosion exists.
- /// Seed with a certified weed-free seed mix, approved by the applicable land owner/manager, containing native, site-appropriate species.
- /// Apply 1 to 2 inches of locally obtained mulch such as pine needles, wood chips, or tub grindings.
- /// Monitor for new invasive plant invasions and expansion of existing weed populations following treatments, and implement weed control measures where needed. Post-treatment monitoring for invasive plants will be conducted annually for up to three years, similar to the frequency and duration specified for USFS land in the USFS Invasive Plant Risk Assessment prepared for the project.
- /// Conduct post-treatment monitoring and reporting every two years for up to 10 years, to evaluate success of restoration treatments. The details of the monitoring and reporting program, including identification and implementation of potential adaptive management actions based on monitoring results, will be developed jointly by CalPeco, TRPA, and the land owner/manager.

All remaining Standard and Guidelines associated with RCO #6 are not applicable to this project.

CONCLUSION

The proposed CalPeco 625 and 650 Electrical Line Upgrade Project is consistent with the AMS for the Sierran Forests, as required by the SNFPA ROD (USDA Forest Service 2004). This project incorporates the APMs, BMPs, and mitigation measures identified above, as protection measures to ensure no net loss or degradation of riparian habitats or aquatic resources. Standards and guidelines, along with mitigation measures, are designed to protect downstream beneficial water uses. The potential for direct, indirect, and cumulative effects from the proposed project would be minimized with implementation of identified protection measures. The project would not interfere with the ability of the U.S. Forest Service to meet riparian conservation objectives.

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