

Number	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
	<p>events will not occur during the activity period for arroyo toads. Vehicle speeds will be limited to 15 mph (24 kph), and no parking or loitering will occur along the access roads. An authorized biologist must permanently remove from within the Project area any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes, to the maximum extent possible and ensure that activities are in compliance with the California Fish and Game Code.</p> <p>8) No stockpiles of materials will occur in areas occupied by arroyo toads.</p> <p>9) Any spills of fluids that may be hazardous to aquatic fauna (gasoline, hydraulic fluid, motor oil, etc.) in areas that may contain arroyo toads will be reported to the USFS and USFWS within one hour.</p> <p>10) For each ac/ha of arroyo toad occupied habitat that is permanently impacted on the Angeles National Forest, five ac/ha of arroyo toad occupied habitat will be conserved in the vicinity of the impacted habitat (i.e., impacts will be offset at a habitat ratio as required by the final Biological Opinion).</p> <p>24c If California red-legged frogs are detected, further surveys within the area will not be required and the avoidance measures detailed below will be followed. If no California red-legged frogs are detected, habitat assessments will be performed on a yearly basis to determine if the area continues to provide suitable habitat; if an area continues to provide suitable habitat, surveys will be repeated every two years until construction is completed. For all areas in which this species has been documented, LADWP shall develop and implement a monitoring plan that includes the following measures in consultation with the USFWS and USFS.</p> <p>1) All trash that may attract predators of red-legged frogs will be removed from work sites or completely secured at the end of each work day.</p> <p>2) Between November 1 and March 31, no work will be authorized within one mile of occupied habitat, and no vehicular crossings at wet fords of those channels will be authorized. The one-mile buffer distance may be reduced based on the topography of the site, with the approval of the USFWS and the USFS.</p> <p>3) If and as required by USFWS, between April 1 and October 31, no work will be authorized within 0.5 mile of occupied habitat, and no vehicular crossings at wet fords of those channels will be authorized.</p> <p>4) If and as required by USFWS, from November 1 thru March 31, overflights will be restricted to a minimum altitude of 1,000 feet (305 m) from the stream bottom within 1.0 mile (1.6 km) of a California red-legged frog occupied stream.</p> <p>5) Before the onset of any construction activities, LADWP shall meet on-site with staff from the USFWS and the USFS-approved biologist (authorized biologist). The authorized biologist shall hold a current red-legged frog permit from USFWS. LADWP shall provide information on the general location of construction activities within habitat of the red-legged frog and the actions taken to reduce impacts to this species. Because red-legged frogs may occur in various locations during different seasons of the year, LADWP, USFWS, USFS, and authorized biologists will, at this preliminary meeting, determine the seasons when specific construction activities would have the least adverse effect on red-legged frogs.</p> <p>6) Where construction would occur in habitat where red-legged frogs are widely distributed, work areas will be fenced in a manner that prevents equipment and vehicles from straying from the designated work area into adjacent habitat. The authorized biologist will assist in determining the boundaries of the area to be fenced in consultation with the LADWP and the responsible agency(s). All workers will be advised that equipment and vehicles must remain within the fenced work areas.</p> <p>7) The authorized biologist will direct the installation of the fence and conduct a minimum of three nocturnal surveys. If red-legged frogs are observed on the final survey or during subsequent checks, the authorized biologist shall halt construction and report to the USFWS and the USFS immediately.</p> <p>8) Fencing to exclude red-legged frogs will be at least 24 inches in height.</p> <p>9) Construction activities that may occur near breeding pools or other areas where large numbers of red-legged frogs may congregate will be conducted during times of the year when individuals have dispersed from these areas (i.e., winter) or the species is dormant, unless otherwise authorized by the USFS and USFWS. The authorized biologist will assist LADWP in scheduling its work activities accordingly.</p> <p>10) Any red-legged frogs found during clearance surveys shall be reported to the USFWS and the USFS immediately. Clearance surveys shall occur on a daily basis in the work area.</p> <p>11) If the authorized biologist determines that Project activities are disturbing the species, they shall notify the construction manager, and the construction manager, in consultation with the biologist, will have the authority to halt all activities until appropriate corrective measures have been completed.</p> <p>12) LADWP shall avoid nighttime activities when red-legged frogs may be present on the access road. Traffic speed should be maintained at 15 mph or less in the work area.</p> <p>13) An authorized biologist must permanently remove from within the Project area any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes, to the maximum extent possible, and ensure that activities are in compliance with the California Fish and Game Code.</p> <p>14) No stockpiles of materials will occur in areas occupied by California red-legged frogs.</p>					

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	<p>15) To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force will be followed at all times.</p> <p>16) Any spills of fluids that may be hazardous to aquatic fauna (gasoline, hydraulic fluid, motor oil, etc.) in areas that may contain California red-legged frogs will be reported to the USFS and the USFWS within one hour.</p>					
Earth Resources						
GEO-1	Foundations for towers and other structures shall be sited a safe distance from the known surface traces of all active faults.	Prior to construction	LADWP USFS BLM			
GEO-2	<p>No structures shall be constructed within the boundaries of identified landslides where the slide material has a mean depth greater than two feet unless design techniques are implemented to reduce potential landslide hazard. Techniques could include excavating potentially unstable material resulting in a flatter more stable slope configuration; reduction of landslide driving forces by removal of earth materials at the top of the landslide; construction of buttress and/or stabilization fills; construction of retaining walls, installation of rock bolts on the face of the slope, or installation of protective wire mesh on the slope face; and/or the construction of debris impact walls at the toe of the slope to contain rock fall debris.</p> <p>If switching stations construction within identified debris flow deposit boundaries is unavoidable, the debris flow deposit(s) shall be excavated down to bedrock beneath and upslope of the switching station, or the foundation shall be anchored in bedrock.</p>	Prior to and during construction	LADWP USFS BLM			
PR-1	A qualified paleontologist/principal investigator shall be retained by LADWP to develop and implement a paleontological resource mitigation plan (PMTP). A qualified paleontologist is defined as an individual with a MS or Ph.D. in paleontology or geology who is experienced with paleontological procedures and techniques, who is knowledgeable in the geology and paleontology of the Project area, and who has worked as a paleontological mitigation project supervisor for at least one year. The qualified paleontologist shall attend relevant pre-construction meetings to consult with grading and excavation contractors concerning excavation schedules, paleontological field techniques, and safety issues. The PMTP shall be based on Society of Vertebrate Paleontology guidelines and meet all regulatory requirements. The PMTP shall identify construction impact areas of major/undetermined to maximum sensitivity for encountering significant resources and the depths at which those resources are likely to be encountered. Preconstruction surveys of these areas shall be conducted before commencement of construction activities. The PMTP shall outline a coordination strategy to ensure that a qualified paleontological monitor will conduct full-time monitoring of all ground disturbance in sedimentary rocks determined to have a major/undetermined to maximum sensitivity. Sedimentary rocks of low, marginal, and undetermined sensitivity shall be monitored on a part-time basis (as determined by the qualified paleontologist). Geologic rock units with zero sensitivity will not require paleontological monitoring. The PMTP shall detail the significance criteria to be used to determine which resources will be avoided or recovered for their data potential. The PMTP shall also detail methods of recovery, preparation and analysis of specimens, final curation of specimens at a federally accredited repository, data analysis, and reporting. The PMTP shall specify that all paleontological work undertaken by LADWP on public land shall be carried out by qualified paleontologists with the appropriate current permits, including, but not limited to a Paleontological Resources Use Permit (for work on public lands administered by BLM). Notices to proceed will be issued by the BLM, USFS, and other agencies with jurisdiction, following approval of the PMTP.	Prior to and during construction	LADWP USFS BLM			
PR-2	A paleontological monitor shall be retained on a full-time basis to monitor Project-related construction excavations (e.g., road grading, switching station mass grading, and tower footing boreholes and pad construction) in areas underlain by paleontological resources of maximum and major sensitivity. Project-related construction excavations in areas underlain by paleontological resources of undetermined sensitivity shall be monitored on a part-time basis, while Project-related construction excavations in areas underlain by paleontological resources of minor or zero sensitivity will not require any monitoring. A qualified paleontological monitor shall have a B.S. in geology or paleontology and have at least one year experience in the collection and salvage of fossil materials. The paleontological monitor shall work under the direction of the qualified paleontologist.	During construction	LADWP USFS BLM			
PR-3	Before the initiation of construction or ground-disturbing activities, all construction personnel shall be trained regarding the recognition of possible subsurface paleontological resources and protection of all paleontological resources during construction. Training shall inform all construction personnel of the procedures to be followed upon the discovery of paleontological resources. All personnel shall be instructed that unauthorized collection or disturbance of protected fossils on or off the right-of-way will not be allowed.	Prior to construction	LADWP			

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PR-4	When fossils are discovered, the qualified paleontologist (or paleontological monitor) shall recover them. In most cases fossil salvage activities can be completed in a short period of time. However, some fossil specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances the paleontologist shall be allowed to temporarily direct, divert, or halt earthwork to allow recovery of fossil remains in a timely manner. At each fossil discovery site, field data forms shall be prepared to document the geographic, geologic, stratigraphic, and taphonomic aspects of the discovery. Because of the potential for the recovering of small fossil remains, such as isolated mammal teeth, as determined by a qualified paleontologist, it may be necessary to collect bulk samples (up to 6,000 pounds) of sedimentary rock matrix. This bulk matrix sample shall then be tested by screenwashing a 200-pound subsample to determine the presence and relative abundance of identifiable microfossils. If positive results are obtained, the entire sample shall be screenwashed.	During construction	LADWP USFS BLM			
PR-5	To the extent feasible, fossil remains collected during monitoring and salvage shall be cleaned, repaired, sorted, and cataloged as part of the mitigation program. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, shall be deposited in a federally accredited repository for both vertebrate and invertebrate fossils such as the Natural History Museum of Los Angeles County or the Museum of Paleontology at the University of California, Berkeley. Funds for curation will be the responsibility of LADWP. The Project qualified paleontologist shall be authorized to submit fossils with accompanying deeds of gift for curation on behalf of LADWP. Donation of the fossils shall be accompanied by financial support for initial specimen storage (costs vary for individual institutions). A final summary report shall be completed that outlines the results of the mitigation program. This report shall include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.	During construction	LADWP USFS BLM			
Water Resources						
HYD-1	For Project construction and operation, off-road or cross-country access routes shall be preferred, as feasible, over the construction of new access roads. Such access roads would be approved in advance by the Environmental Monitor and the Project Manager and be flagged with easily seen markers. Any new access roads shall be constructed by mowing or crushing, rather than blading, wherever possible. Mowing for temporary or permanent access roads shall be limited to a 12 foot wide area on straight portions of the road (slightly wider on turns), and the mowing height shall be no less than 4 inches from finished grade. Existing crossings shall be utilized at perennial streams, wetlands, and irrigation channels to the extent feasible. New access roads not required for ongoing maintenance shall be permanently closed after construction using the most effective and least environmentally damaging methods appropriate to that specific area, with concurrence of the landowner or land manager (e.g., stockpiling and replacing topsoil, or rock replacement).	During construction and operation & maintenance	LADWP USFS BLM			
HYD-2	Roads would be built as near as possible to right angles to the streams and washes, if feasible. Culverts would be installed where necessary. All construction and maintenance activities shall be conducted in a manner that would minimize disturbance to vegetation, drainage channels, and intermittent or perennial stream banks. In addition, road construction would include dust-control measures during construction in sensitive areas. All existing roads would be left in a condition equal to or better than their condition before the construction of the transmission line.	During construction and operation & maintenance	LADWP USFS BLM			
HYD-3	New impervious areas associated with temporary construction would be restored to existing conditions, including but not limited to revegetation, to the extent possible after completion of Project construction.	Post construction	LADWP USFS BLM			
HYD-4	Stormwater drainage inside switching station walls would be designed to minimize erosion and increase sediment control. Internal runoff would be released from the switching station by means of surface drainage structures designed to filter contaminants from water flow. Drainage from the property would be collected and controlled by surface improvements, as detailed in the SWPPP.	Prior to and during construction	LADWP			
HYD-5	Structures and new access roads placed within a 100-year floodplain would be engineered so that they do not impede or redirect flood flows or raise the flood elevation.	During construction	LADWP USFS BLM			
HYD-6	Structures within the 100-year floodplain of rivers and streams would be designed to minimize the capture of flood debris to prevent flow obstructions and scouring during flood flows.	Prior to construction	LADWP USFS BLM			
HYD-7	Structures adjacent to or downslope of lakes and reservoirs would be designed to minimize damage from inundation of a seismic seiche.	Prior to construction	LADWP USFS			

* Note: Federal agencies identified would be responsible only if the mitigation measures noted are selected in their respective Records of Decision.