

Chapter 6

Mitigation Monitoring and Reporting Program

6.1 Introduction

Western and the Authority included a series of EPMs as part of the Proposed Project to minimize potential environmental impacts during construction, operation, and maintenance. In addition, mitigation measures were formulated that would avoid, minimize or compensate for impacts identified in this EIS/EIR. This Mitigation Monitoring and Reporting Program (MMRP) is intended to be used by Western to ensure that each mitigation measure, adopted as a condition for project approval, is implemented. The MMRP meets the requirements of NEPA and is consistent with the CEQA, as amended (Guidelines Section 15074(d)) for the implementation of mitigation.

6.2 Mitigation Implementation and Monitoring

Western will be responsible for monitoring the implementation of mitigation measures (listed in Table 6-1). Western will designate specific personnel to implement and document all aspects of the MMRP. Western will ensure that the designated personnel have authority to enforce mitigation requirements and will be capable of terminating project construction activities found to be inconsistent with mitigation objectives.

Western will demonstrate compliance with applicable permit conditions to appropriate regulatory agencies. It will also be responsible for ensuring that construction personnel understand their responsibilities for adhering to the performance requirements of the mitigation plan and other contractual requirements related to the implementation of mitigation as part of Proposed Project construction.

Table 6-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	<p>MM AQ-1: Reduce or offset construction equipment emissions. Western will specify that construction contractors should:</p> <ul style="list-style-type: none"> ▪ Use alternative fueled or catalyst-equipped diesel construction equipment or construction equipment powered by engines meeting, at a minimum, Tier 3 or higher emission standards, as set forth in §2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 Code of Federal Regulations. ▪ Minimize heavy equipment use, trips, and unnecessary idling time (e.g., 5 minute maximum). ▪ <u>Maintain and tune engines per the manufacturer's specifications.</u> ▪ <u>Prohibit any tampering with engines and require adherence to manufacturer's recommendations.</u> ▪ <u>Locate construction equipment and staging zones away from sensitive land uses that include children, the elderly, and the infirm.</u> ▪ Limit the hours of operation of heavy duty equipment and/or the amount of equipment in simultaneous use. ▪ Replace fossil-fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set). ▪ <u>Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliatives where appropriate. These dust suppressants should remain effective on inactive and active sites during all phases of construction.</u> ▪ <u>Install wind breaks or fencing at windward sides of substation sites and staging areas.</u> ▪ <u>When hauling material and operating non-earthmoving equipment, prevent spillage.</u> ▪ <u>Limit traffic speeds on unpaved roads to 15 miles per hour and limit speed of earth-moving equipment to 10 miles per hour.</u> ▪ <u>Install wheel washers or wash off all trucks and equipment leaving substation sites.</u> ▪ Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of construction activity during the peak-hour of vehicular traffic on adjacent roadways. ▪ Implement construction activity management (e.g., rescheduling activities to reduce short-term impacts). <u>The construction activity management strategy should include cost-effective commitments to use newer on-highway vehicles, non-road vehicles and equipment meeting or exceeding Tier 4 standards, and advanced technology demonstration and deployment, for example for plug-in hybrid-electric vehicles and battery-electric vehicles. Prior to commencing construction, the construction contractors shall submit the construction activity management strategy and schedule to Western for review and approval.</u> ▪ <u>Periodically inspect activities to ensure that construction adheres to the controls required by this measure, California's anti-idling requirements, and the construction activity management schedule. During construction, the construction contractors shall submit monthly construction activity reports and inspection records to Western for review and approval.</u> ▪ Upon completion of detailed engineering plans for the SLTP and prior to commencing construction, Western will conduct a detailed air quality analysis of the construction phase of the project to determine the feasibility and necessity of finance and verify implementation of in- additional off-site emission reduction programs to offset SLTP construction emissions. <u>Western commits to enter into an agreement or other legally binding instrument with the SJVAPCD to implement 60 tons of NOx and 82 tons of PM10 criteria pollutant emission reductions, as necessary for the Agency Preferred Alternative. To achieve measurable and enforceable emission reductions, the SJVAPCD may administer the emission reduction projects on the behalf of Western, and Western may require the SJVAPCD to prepare a report demonstrating that the emission reduction projects have achieved 60 tons of successful and actual NOx reductions to levels that are less than the EPA demonstrate General Conformity thresholds.</u>
Location	Entire Project area
Monitoring/Reporting Action	Report results of air quality analysis
Effectiveness Criteria	Construction equipment emissions are reduced or offset

Table 6-1. Mitigation Monitoring and Reporting Program

Responsible Agency	Western
Timing	Prior to construction, Construction
Mitigation Measure	MM BIO-1: Conduct surveys for special-status plants and sensitive habitats. Prior to construction, an agency-approved botanist will survey Project areas during appropriate blooming periods for listed and special-status plant species and sensitive habitats. Special-status vegetation communities and species will be reported to the USFWS and/or CDFW.
Location	Entire Project area
Monitoring/Reporting Action	Report special-status vegetation communities and species to the USFWS and/or CDFW
Effectiveness Criteria	Special-status plants and sensitive vegetation communities will be mapped
Responsible Agency	Western
Timing	Prior to construction

Table 6-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	<p>MM BIO-2: Avoidance and minimization measures for special-status plants and vegetation communities. The following measures will be implemented during construction and O&M activities for special-status plants and vegetation communities. Special-status plants include federal and state listed plant species (large-flowered fiddleneck, Hoover’s spurge, Delta button-celery, Contra Costa goldfields, Mason’s lilaeopsis, Hartweg’s golden sunburst, and Greene’s tuctoria), and all CRPR special-status plants.</p> <p>During construction activities:</p> <ul style="list-style-type: none"> ▪ From March 1 to August 31, vehicle access will be permitted only on well-established roads until an agency-approved botanist has surveyed the site. ▪ Ground-disturbing activities will require a bloom season survey by an agency-approved biologist to flag any existing plant populations. Ground disturbance will be prohibited within the flagged boundary unless further consultation with USFWS or coordination with CDFW (as appropriate) is completed. Flagging or other field markers such as temporary fence posts, or other markers that will last for the construction season, will be placed in the prohibited area to ensure that no disturbance occurs at that location. Populations of special-status plants will also be mapped and located in the field using a GPS so that they are clearly identified at all times of the year and construction workers can easily identify areas to be avoided. The area where special-status plants are being preserved will be avoided by workers doing construction activities at all times of the year. After construction is completed the flagging and markers can be removed. ▪ During Project construction, a biological monitor will be present when work occurs within 100 feet of a flagged listed plant population. ▪ Standard erosion- and sediment-control measures will be installed for all ground-disturbing activities to prevent impacts to special-status plants and vegetation communities. ▪ Where impacts to special-status plants cannot be avoided, and mitigation cannot be achieved through the purchase of credits at a mitigation or conservation bank, the top 4 inches of topsoil will be removed and salvaged and applied to an appropriate on-site or off-site restoration area. When this topsoil is replaced, compaction will be minimized. Soil will not be stockpiled for more than one year to maintain seed viability. ▪ Western will comply with conditions of any affected existing conservation easement, and will avoid and minimize impacts within conservation easements to the extent feasible. <p>During O&M activities:</p> <ul style="list-style-type: none"> ▪ From March 1 to August 31, vehicle access will be permitted only on well-established roads until an agency-approved biologist has surveyed the site. ▪ If vegetation management activities are proposed between March 1 and August 31, an agency-approved biologist will mark special-status plant populations, including a 50-foot (15-meter) buffer zone, prior to construction and O&M activities. Within 100 feet (30.5 meters) of the marked area, the following work area limits will be provided: (1) only manual clearing of vegetation will be allowed within 50 feet of the edge of the flagged area, (2) mechanical treatment of all kinds (including mowers, tractors, chippers, dozers) will be prohibited, and (3) herbicide use will be prohibited at all times with the exception of direct application to target vegetation. ▪ Workers will refer to maps that show the location of mapped populations of special-status plants so that these areas can be avoided. ▪ Standard erosion- and sediment-control measures will be installed for all ground-disturbing activities to prevent impacts to plants. ▪ Where impacts to special-status plants cannot be avoided, and mitigation cannot be achieved through the purchase of credits at a mitigation or conservation bank, the top 4 inches of topsoil will be removed and salvaged and applied to an appropriate on-site or off-site restoration area. When this topsoil is replaced, compaction will be minimized. Soil will not be stockpiled for more than one year to maintain seed viability. ▪ Western will comply with conditions of any affected existing conservation easement, and will avoid impacts within conservation easements to the extent feasible.
Location	Special-status plant populations and sensitive vegetation communities
Monitoring/Reporting Action	Flag and map sensitive resources for avoidance, conduct biological monitoring

Table 6-1. Mitigation Monitoring and Reporting Program

Effectiveness Criteria	Effects to special-status plants and sensitive vegetation are avoided or minimized
Responsible Agency	Western
Timing	Construction and O&M
Mitigation Measure	<p>MM BIO-3: Provide compensatory mitigation for impacts to special-status plants. Western will purchase credits in an appropriate mitigation bank or habitat conservation bank for the plants species to be impacted as appropriate. If a mitigation bank is not available Western will contribute in-lieu fees to a mitigation bank or habitat conservation bank that can provide appropriate mitigation for the special-status plant species affected. Western will work with the appropriate resource agency (USFWS and/or CDFW) to ensure adequate compensation. Mitigation ratios will be sufficient to achieve the performance criterion of no net loss of the affected plant species.</p> <p>If mitigation cannot be achieved by purchase of credits in a mitigation or conservation or by in-lieu fees, then Western will prepare a mitigation plan that describes the compensatory mitigation measures that will be implemented for special-status plants. The mitigation plan will be submitted to the USFWS for approval for federal listed plants and to CDFW for state-listed and CRPR plants. The mitigation plan will include the mitigation measures, which are adopted from the CNPS <i>Policy on Mitigation Guidelines Regarding Impacts to Rare, Threatened and Endangered Plants</i> (CNPS, 1998); or equally effective alternative measures.</p>
Location	Special-status plant species habitats
Monitoring/Reporting Action	Submit plan that describes avoidance or compensatory mitigation measures; report permanent and temporary habitat loss and compensation including habitat location and status
Effectiveness Criteria	Special-status plants are avoided or compensated for
Responsible Agency	Western
Timing	Prior to construction
Mitigation Measure	<p>MM BIO-4: Provide compensatory mitigation for impacts to federally listed branchiopod habitat. If effects to branchiopod habitats cannot be avoided, Western will compensate for effects through one of the following: (a) affected pools will be restored on site after construction is complete, (b) credits will be acquired from an agency-approved conservation bank, (c) funds will be deposited into an approved in-lieu fee program, or (d) a conservation easement will be purchased. Compensation amounts will be approved by USFWS.</p> <p>For onsite creation or restoration, Western will develop and implement a mitigation, monitoring, and reporting plan with input from regulatory agencies that outlines performance standards and success criteria for ensuring long-term success of mitigation. If it is necessary for cysts to be salvaged to restore affected pools and with concurrence from the USFWS, an agency-approved biologist will salvage soils from local sites that are known to support vernal pool branchiopods at least 2 weeks before the onset of construction, or during the preceding dry season if pools are anticipated to hold water when construction begins. The salvaged soil samples will be stored and used to inoculate restored pools.</p>
Location	Branchiopod habitats
Monitoring/Reporting Action	Track the development of habitat conditions that are conducive to the establishment of vernal pool branchiopods; submit plan that outlines performance standards and success criteria for ensuring long-term success of mitigation
Effectiveness Criteria	Size, vegetation species present, date of initial ponding, ponding duration, and wildlife usage
Responsible Agency	Western
Timing	Prior to construction

Table 6-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	<p>MM BIO-5: Avoidance and minimization measures for valley elderberry longhorn beetle. The following measures will be implemented during construction and O&M activities to protect valley elderberry longhorn beetle.</p> <p>During construction activities:</p> <ul style="list-style-type: none"> ▪ If the Project may affect valley elderberry longhorn beetle, take authorization/permits will be obtained from the USFWS. Upon completion of the authorization/permit process, Western will implement the terms and conditions of the authorizations for this beetle, which could include but may not be limited to the following: <ul style="list-style-type: none"> – A 100-foot (30.5-meter) no-disturbance buffer fence will be installed and maintained around the perimeter of elderberry shrubs. No grading or any other ground-disturbing activities will be conducted within the fenced area without prior verification that the requirements of the USFWS have been satisfied including the issuance of any necessary permits or authorizations. – Contractors will be briefed on the status of the beetle, the need to protect its elderberry host plant, the need to stay out of this 100-foot buffer, and the possible penalties for not complying with these requirements. – Signs will be erected every 50 feet (15 meters) along the edge of avoidance areas with the following statements: “This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment.” The signs will be clearly readable from a distance of 20 feet (6 meters), and will be maintained for the duration of construction. – Biological monitoring will be provided by an agency-approved biologist during construction in all areas within 100 feet (30.5 meters) of elderberry plants. <p>During O&M activities:</p> <ul style="list-style-type: none"> ▪ Prior to initiating vegetation clearance with elderberry plants present, qualified personnel will clearly flag or fence each elderberry plant with a stem measuring 1 inch (2.54 centimeters) or greater in diameter at ground level. If an elderberry plant meeting this criterion is present: <ul style="list-style-type: none"> – A minimum buffer zone of 20 feet (6 meters) outside of the dripline of each elderberry plant will be provided during all routine O&M activities within which all O&M activities except manual clearing will be prohibited. – No insecticides, herbicides, fertilizers, or other chemicals will be used within 100 feet (30.5 meters) of an elderberry plant, except direct application to target vegetation. – Trimming, rather than removal of shrubs, will be used where feasible. Directional felling of trees and manual-cutting trees prior to removal will be used to minimize impacts to elderberries. – Replacement of existing conductor or installation of additional lines will be performed by pulling the line from tower to tower without touching the vegetation in areas where elderberry plants are present.
Location	Elderberry shrubs
Monitoring/Reporting Action	Flag or fence for avoidance, conduct biological monitoring
Effectiveness Criteria	Elderberry shrubs are avoided or compensated for
Responsible Agency	Western
Timing	Construction and O&M

Table 6-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	MM BIO-6: Provide compensatory mitigation for impacts to elderberry plants. If complete avoidance (100 feet) of elderberry plants is not feasible during construction, a mitigation plan will be developed in accordance with the most current USFWS mitigation guidelines (currently USFWS, 1999) that will include provision for compensatory mitigation. The mitigation plan will include, but may not be limited to, relocating elderberry shrubs, planting elderberry shrubs, establishing success criteria, monitoring relocated and planted elderberry shrubs to ensure success, and an adaptive management plan in the event that mitigation is not successful.
Location	Elderberry shrubs
Monitoring/Reporting Action	Submit plan that describes avoidance or compensatory mitigation measures; report number of affected shrubs and associated compensation including habitat location and status
Effectiveness Criteria	Elderberry shrubs are avoided or compensated for
Responsible Agency	Western
Timing	Prior to construction
Mitigation Measure	MM BIO-7: Avoidance and minimization measures for Alameda whipsnake. Western will minimize or avoid effects to Alameda whipsnake and its habitats by implementing the following measures. <ul style="list-style-type: none"> ▪ If suitable Alameda whipsnake habitat will be impacted by the proposed project, Western will consult with the USFWS and coordinate with CDFW. Applicable take authorization/permits will be obtained, as necessary. Upon completion of the authorization/permit process, Western will implement the terms and conditions of the authorizations, which could include but may not be limited to the following: <ul style="list-style-type: none"> – If habitat for Alameda whipsnake will be impacted by project activities, Western will develop and implement a protection and monitoring plan for Alameda whipsnake that will be approved by USFWS and coordinated with CDFW. Measures in this plan will include, but may not be limited to, a procedure for conducting preconstruction surveys and/or trapping surveys before the onset of initial ground-disturbing activities in areas with high-quality habitat that cannot be avoided, surveying before construction and/or restoration begins each day that these activities will occur, and direct monitoring by an agency-approved biologist of the occupied or potentially occupied grassland/scrub/mosaic habitats in the Project area that will be directly affected by Project construction.
Location	Alameda whipsnake habitat
Monitoring/Reporting Action	Submit protection and monitoring plan
Effectiveness Criteria	Alameda whipsnakes and their habitat are avoided or minimized
Responsible Agency	Western
Timing	Prior to construction

Table 6-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	<p>MM BIO-8: Avoidance and minimization measures for blunt-nosed leopard lizard. To protect blunt-nosed leopard lizard, Western will implement the following for both construction and O&M activities.</p> <ul style="list-style-type: none"> ▪ An agency-approved (USFWS and CDFW) biologist will conduct blunt-nosed leopard lizard surveys for each ground disturbance site in blunt-nosed leopard lizard habitat per the <i>2004 Approved Survey Methodology for the Blunt-nosed Leopard Lizard</i> (CDFG, 2004) or currently approved methodology. ▪ If blunt-nosed leopard lizards are not detected during surveys, a flashing barrier or other short-term or longer-term fencing plan approved by CDFW will be installed when feasible and necessary around the work area to prevent blunt-nosed leopard lizards from entering the work area. Fencing options may be shorter term (temporary for just a few hours) or longer term (days or weeks) and may include but would not be limited to a 36 inches (0.9 meters) tall barrier, buried 6 inches (15 centimeters) deep, and reinforced with rebar or T-posts, and may include escape ramps of silt-fencing material, wood, or soil to allow any undetected blunt-nosed leopard lizard to exit the site. Fencing plans and types may be altered based on length of time the fence is to remain in place, terrain, and Project needs. Fencing will be removed upon Project completion. ▪ If blunt-nosed leopard lizards are subsequently found within the fenced work area, a section of fence may be removed so that the lizard may leave the exclusion zone. The agency-approved biologist will monitor the location of the blunt-nosed leopard lizard to ensure that it has moved outside of the work area. The fencing will be immediately replaced to exclude the lizard from the construction area. When all observed blunt-nosed leopard lizards have exited the site, additional surveys will be implemented during appropriate conditions for detection for at least five survey days before construction begins to ensure that no more blunt-nosed leopard lizards inhabit the work-area exclusion zone. ▪ If blunt-nosed leopard lizards are detected during surveys, any active burrow within a 200-foot radius of activity sites will be flagged and marked with a burrow number prior to construction or O&M activities. Flagged, 50-foot (15-meter) exclusion zones will be established around any potentially active burrow. Construction activities, with the exception of essential vehicle operation on existing roads and foot travel, will be prohibited within this exclusion zone. A flashing barrier or appropriate fencing approved by CDFW will be established between burrow(s) and work sites. The barrier or fencing will be established at least 180 degrees around the burrow site and will flare out at the ends to direct lizards away from the activity sites. The barrier or fencing will not enclose an active burrow site. ▪ An agency-approved biological monitor will monitor all vehicular traffic within 200 feet (61 meters) of active burrows by escorting all vehicles through this zone on foot. The monitor will walk in front of the vehicle to ensure that no blunt-nosed leopard lizards are in the road or path of travel. All personnel vehicles or other vehicles not needed for construction activities will park at least 200 feet (61 meters) from the flagged burrow site and crews will walk into the work area. ▪ An agency-approved biological monitor will be on site for any activities within suitable blunt-nosed leopard lizard habitat. Prior to construction or O&M activities each day within suitable blunt-nosed leopard lizard habitat, the monitor will conduct a brief ground survey of the site during appropriate conditions for detection to verify that no blunt-nosed leopard lizards are visible within the site. The agency-approved biological monitor will have the authority to stop and/or redirect Project activities in coordination with the project manager and Western's natural resources staff to ensure the protection of blunt-nosed leopard lizards. The agency-approved biological monitor will complete daily reports/logs summarizing activities and environmental compliance. ▪ Vehicle speed limit of 15 mph (24 kph) will be enforced during construction and O&M activities on all nonpublic Project access roads within blunt-nosed leopard lizard habitat and outside of blunt-nosed leopard lizard flagged areas. Vehicle speeds within 200 feet (61 meters) of flagged blunt-nosed leopard lizard areas (known presence) will be contingent upon the walking speed of biological monitor.
Location	Blunt-nosed leopard lizard habitat
Monitoring/Reporting Action	Install exclusion fencing, flag burrows for avoidance, conduct biological monitoring
Effectiveness Criteria	Blunt-nosed leopard lizards and their habitat are avoided or compensated for

Table 6-1. Mitigation Monitoring and Reporting Program

Responsible Agency	Western
Timing	Construction and O&M
Mitigation Measure	<p>MM BIO-9: Avoidance and minimization measures for special-status reptiles. To protect California legless lizard, coast horned lizard, and San Joaquin whipsnake, Western will implement the following measures during construction and ground-disturbing O&M activities.</p> <ul style="list-style-type: none"> ▪ A preconstruction survey for California legless lizard, coast horned lizard, and San Joaquin whipsnake will be conducted by an agency-approved biologist in all suitable habitats where tower construction, new access roads, or ground-disturbing O&M activities will affect suitable sandy grassland, scrub, sycamore, or sandy wash habitats. The survey will be conducted within 14 to 30 days of the onset of construction. If individuals of these species are not found, no further action will be required. ▪ If California legless lizard, coast horned lizard, or San Joaquin whipsnake are found, occupied habitat as well as other suitable habitats will be avoided to the extent feasible. An agency-approved biologist will conduct daily surveys in suitable habitats during construction and O&M activities and will attempt to capture or otherwise move animals out of harm's way when necessary.
Location	Special-status reptile habitat
Monitoring/Reporting Action	Flag habitat for avoidance, biological monitoring
Effectiveness Criteria	Special-status reptiles are avoided or compensated
Responsible Agency	Western
Timing	Construction and O&M

Table 6-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	<p>MM BIO-10: Avoidance and minimization measures for giant garter snake. Western will implement the following measures to protect giant garter snake during construction and O&M activities in Los Banos Creek and adjacent uplands below the dam impounding Los Banos Creek Reservoir.</p> <p>During construction activities:</p> <ul style="list-style-type: none"> ▪ A preactivity survey will be conducted no more than 24 hours before construction activities begin, and an agency-approved biologist will be on site during all activities in potential giant garter snake aquatic and upland habitats. Preactivity surveys will be repeated whenever a lapse in construction activity of two weeks or longer occurs. The biologist will have the authority to stop construction if a giant garter snake is encountered; construction may resume when the snake has been seen to leave the area on its own or the agency-approved biologist confirms the snake will not be harmed. Only personnel with a USFWS 10(a)(1)(A) recovery permit will have the authority to capture and/or relocate giant garter snakes encountered in project area. All sightings and incidental take will be reported to the Western Natural Resources Department, who will report to the USFWS. <p>During Category A O&M activities (Appendix D):</p> <ul style="list-style-type: none"> ▪ Implement EPMs. <p>During Category B O&M activities (Appendix D):</p> <ul style="list-style-type: none"> ▪ With the exception of direct application, use of herbicides within 200 feet (61 meters) of potential giant garter snake habitat will be prohibited at all times. ▪ Giant garter snake aquatic and upland habitats will be flagged as environmentally sensitive areas by an agency-approved biologist within or adjacent to the disturbance footprint. Only manual vegetation removal will be allowed within the flagged area. ▪ An agency-approved monitor will be present for O&M activities within the flagged area. Ground-disturbing activities will be avoided within 200 feet (61 meters) from the banks of giant garter snake aquatic habitat. If this were not feasible, O&M activities will be conducted between May 1 and September 30, the giant garter snake active period, and all potentially affected aquatic habitats will be dewatered prior to any ground disturbance. Dewatered areas will remain dry with no puddled water remaining for at least 15 consecutive days prior to excavation or filling of that habitat. If a site could not be completely dewatered, prey items will be netted or otherwise salvaged if present. ▪ If it is not feasible to conduct O&M activities between May 1 and September 30, the Sacramento Fish and Wildlife Office will be contacted, and the following actions will be performed: <ul style="list-style-type: none"> – A preactivity survey will be conducted no more than 24 hours before construction activities begin, and an agency-approved biologist will be on site during all activities in potential giant garter snake aquatic and upland habitat. Preactivity surveys will be repeated whenever a lapse in construction activity of two weeks or longer occurs. The biologist will have the authority to stop construction if a giant garter snake is encountered; construction may resume when the snake has been seen to leave the area on its own or the agency-approved biologist confirms the snake will not be harmed. Only personnel with a USFWS 10(a)(1)(A) recovery permit will have the authority to capture and/or relocate giant garter snakes encountered in project area. All sightings and incidental take will be reported to the Western Natural Resources Department, who will report to the USFWS – Any temporary fill and debris that might provide habitat for giant garter snakes will be immediately removed and disturbed areas will be restored to pre-Project conditions after completion of O&M activities. Restoration work could include replanting species removed from banks or replanting emergent vegetation in the active channel. Filter fences and mesh will be of a material that will not entrap reptiles and amphibians. Erosion-control blankets will be used as a last resort because of their tendency to biodegrade slowly and trap reptiles and amphibians. No monofilament plastics will be used for erosion control near aquatic features. <p>During Category C O&M activities (Appendix D):</p> <ul style="list-style-type: none"> ▪ Follow all measures listed for Category A and B activities above. Prior to site mobilization, Western will provide notification to appropriate agencies.
Location	Los Banos Creek and adjacent uplands below the dam impounding Los Banos Creek Reservoir

Table 6-1. Mitigation Monitoring and Reporting Program

Monitoring/Reporting Action	Biological monitoring
Effectiveness Criteria	Giant garter snakes and their habitat are avoided
Responsible Agency	Western
Timing	Construction and O&M
Mitigation Measure	<p>MM BIO-11: Avoidance and minimization measures for western pond turtle. Western will implement the following measures to protect western pond turtle during construction and O&M activities.</p> <p>During construction activities:</p> <ul style="list-style-type: none"> ▪ A preconstruction survey for western pond turtles will be conducted by an agency-approved biologist in all construction areas identified as potential nesting or dispersal habitat located within 1000 feet (305 meters) of potential aquatic habitat. The survey will be conducted within 48 hours prior to initiation of construction activities. If a western pond turtle is found during preconstruction surveys in an area where it may be affected by construction, an agency-approved biologist will relocate it with permission from CDFW to a site that is a suitable distance from construction activities as necessary. If a nest is found within the construction area, construction will not take place within 100 feet (30.5 meters) of the nest until the turtles have hatched and have left the nest or can be safely relocated, as determined through coordination with CDFW. ▪ Because attempting to locate pond turtle nests will not necessarily result in detection, after completion of preconstruction surveys and any necessary relocation, exclusion fencing will be placed around all construction sites adjacent to suitable aquatic habitats during the nesting season to eliminate the possibility of nest establishment in uplands adjacent to aquatic areas, as necessary. ▪ If construction activities occur near aquatic areas where turtles have been identified during preconstruction or other surveys, a biological monitor will be present during construction. If a turtle is found, it will be relocated, if necessary, to a site a suitable distance from construction activities. ▪ If a pond turtle is encountered on the Project site, any construction activity that could result in harm of the turtle will immediately cease and will not resume until the agency-approved biologist has moved the turtle to a safe location. <p>During O&M activities:</p> <ul style="list-style-type: none"> ▪ For Category A activities (Appendix D): follow standard EPMs. ▪ For Category B and C activities (Appendix D): From April 15 to July 15, any ground-disturbing activity within 400 feet (122 meters) of a permanent pond, lake, creek, river, or slough that could affect the bed, bank, or water quality of any of these features will be prohibited OR an agency-approved biologist will inspect the Project area. If adult or juvenile pond turtles are present, an agency-approved biologist will monitor Project activities to ensure that no turtles are harmed. If the biologist determines that nests could be adversely affected, potential nesting areas will be avoided between June 1 and October 31.
Location	Western pond turtle habitat
Monitoring/Reporting Action	Flag habitat for avoidance, install exclusion fencing during nesting season, biological monitoring
Effectiveness Criteria	Western pond turtles, nests, and habitat are avoided
Responsible Agency	Western
Timing	Construction and O&M

Table 6-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	<p>MM BIO-12: Provide compensatory mitigation for impacts to special-status reptiles. If habitat for listed or other special-status reptiles cannot be avoided, Western will provide compensatory mitigation as follows:</p> <ul style="list-style-type: none"> ▪ Alameda Whipsnake. Western will compensate for permanent and temporary loss of upland scrub habitats that could support Alameda whipsnake by (a) purchasing credits at a conservation bank approved by CDFW and USFWS, (b) purchasing a conservation easement, (c) donating funds to an approved in-lieu fee program, or (d) restoring habitats affected by the Project. For onsite creation or restoration, Western will develop and implement a mitigation, monitoring, and reporting plan with input from and approval by regulatory agencies that outlines performance standards and success criteria for ensuring long-term success of mitigation. ▪ Blunt-Nosed Leopard Lizard. Western will provide compensation for permanent and temporary impacts to blunt-nosed leopard lizard habitat by (a) purchasing credits at a conservation bank approved by CDFW and USFWS, (b) purchasing a conservation easement, (c) donating funds to an approved in-lieu fee program, or (d) restoring habitats affected by the Project. For onsite creation or restoration, Western will develop and implement a mitigation, monitoring, and reporting plan with input from and approval by regulatory agencies that outlines performance standards and success criteria for ensuring long-term success of mitigation. ▪ Other Special-Status Reptiles. If California legless lizard, coast horned lizard, or San Joaquin whipsnake are found during preconstruction surveys and avoidance of habitats is not feasible, Western will restore habitats temporarily affected. Surveys, fencing, and compensatory mitigation for blunt-nosed leopard lizard habitat and upland habitat for California red-legged frog and California tiger salamander will benefit these species as well.
Location	Habitat for Alameda whipsnake, blunt-nosed leopard lizard, and other special-status reptiles
Monitoring/Reporting Action	Submit plan that describes avoidance or compensatory mitigation measures; report permanent and temporary habitat loss and compensation including habitat location and status
Effectiveness Criteria	Habitat is avoided or compensated
Responsible Agency	Western
Timing	Prior to Construction

Table 6-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	<p>MM BIO-13: Avoidance and minimization measures for California red-legged frog. Western will implement the following measures to protect California red-legged frog during construction and O&M activities.</p> <p>During construction activities:</p> <ul style="list-style-type: none"> ▪ California red-legged frog presence will be assumed in all aquatic habitats for which protocol surveys have not been conducted in the year prior to construction. Uplands within 1 mile (1.6 kilometers) will be assumed to be occupied around all aquatic habitats for which protocol surveys have not been conducted. ▪ If the Project may affect California red-legged frog, take authorization/permits will be obtained from the USFWS. Upon completion of the authorization/permit process, Western will implement the terms and conditions of the authorizations, which could include but may not be limited to the following. <ul style="list-style-type: none"> – Transmission towers and new access roads will be sited as far from aquatic habitats as is feasible. – To the extent feasible, construction activities will take place during the dry season (generally June 1 through September 30) within 1.24 miles (2 kilometers) of aquatic habitats. If construction extends into the wet season (generally October 1 through May 31), temporary exclusion fencing will be installed 100 feet (30.5 meters) out from work areas to prevent California red-legged frogs from entering construction areas as necessary. – Escape ramps will be constructed in all trenches or excavations to allow wildlife to escape. – Biological monitoring will be provided by a USFWS-approved biologist during construction in all areas within 1.24 miles (2 kilometers) of aquatic habitats. The biological monitor will identify, capture, and relocate sensitive amphibians present in work areas if necessary. – A 300-foot (91-meter) setback, incorporating both riparian vegetation and uplands, will be provided on all sides of aquatic habitats identified as occupied or assumed occupied by red-legged frogs as feasible. A setback may be reduced or expanded through consultation with the USFWS depending on whether it would (a) affect habitat or (b) result in adverse impacts to the species or the biological values of the habitat. Setbacks will maintain existing vegetation free of disturbance and new construction, equipment storage, vehicle parking, and other activities that might compact or disturb soils or vegetation or that could introduce contaminants into aquatic habitats. Setbacks will be clearly delineated during the construction. – Water quality will be maintained through implementation of appropriate erosion-control measures to reduce siltation and contaminated runoff from Project sites by maintaining vegetation within buffers and/or through the use of hay bales, filter fences, vegetative buffer strips, or other accepted equivalents. – Construction and other ground disturbances will be prohibited within setbacks. The use of insecticides, herbicides, rodenticides, and pesticides will occur in accordance with USEPA guidelines addressing the use of these materials in occupied California red-legged frog habitat. – Where aquatic sites cannot be avoided by 300 feet (91 meters) on all sides, a USFWS-approved biologist will survey the work site immediately prior to construction activities. If California red-legged frogs, tadpoles, or egg masses are found, the approved biologist will contact USFWS to determine whether moving any of these life-stages is appropriate. In making this determination USFWS will consider whether an appropriate relocation site exists. If USFWS approves moving animals, the approved biologist will be allowed sufficient time to move California red-legged frogs from the work site before work activities begin. Only USFWS-approved biologists will participate in activities associated with the capture, handling, and monitoring of California red-legged frogs. Bare hands will be used to capture California red-legged frogs. USFWS-approved biologists will not use soaps, oils, creams, lotions, repellents, or solvents of any sort on their hands within two hours before and during periods when they are capturing and relocating individuals. To avoid transferring disease or pathogens from handling the amphibians, USFWS-approved biologists will follow the <i>Declining Amphibian Populations Task Force Fieldwork Code of Practice</i>. <p>During O&M activities:</p> <ul style="list-style-type: none"> ▪ A USFWS-approved biologist will identify potential California red-legged frog breeding habitat within the vicinity of O&M activities, and will flag a 500-foot (152-meter) buffer. The following restrictions will apply within the buffer: (1) only manual vegetation removal will be allowed; (2) only direct (e.g., injection and cut-stump) herbicide application methods will be allowed, except when otherwise restricted; (3) no ground disturbance (e.g., digging or auguring) will be allowed; and (4) erosion-control devices will be of a material that will not entrap amphibians.
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Table 6-1. Mitigation Monitoring and Reporting Program

	<ul style="list-style-type: none"> ▪ If it is not feasible to follow the above-stated measures, a pre-activity survey will be conducted no more than 24 hours before Project O&M activities begin. If ground disturbance is required, an USFWS-approved biologist will identify potential California red-legged frog upland refuge habitat within disturbance areas. Areas that may provide suitable upland refuge will be avoided to the extent feasible. Ground disturbance will not occur in California red-legged frog aquatic/ breeding habitat. If an area that provides suitable upland refuge must be impacted, a USFWS-approved biologist will determine if California red-legged frogs are present using visual surveys, an endoscope, or other accepted detection method. If California red-legged frogs are detected, the area will be avoided using a buffer determined appropriate by the biologist, and a USFWS-approved monitor will remain on site to ensure that California red-legged frogs are not impacted during Project activities in the vicinity. A USFWS-approved biologist will remain on site during all activities to ensure protection of California red-legged frog or an exclusion barrier will be constructed around the work site using USFWS-approved methods and materials. Exclusion materials will be removed at the end of the work activity. Crews will inspect any trenches left open for more than 24 hours for trapped animals. Only a USFWS-approved biologist will remove trapped animals. ▪ To comply with the California red-legged frog injunction for herbicide applications, Western will ensure that, in the counties named in the injunction, there will be no ground application of any of the chemicals named in the injunction (http://www.epa.gov/espp/litstatus/redleg-frog/steps-info.htm). Currently, the no-use buffer is 60 feet (18 meters) from any aquatic feature, aquatic breeding habitat, non-breeding aquatic habitat, and upland habitat.
Location	California red-legged frog habitat
Monitoring/Reporting Action	Flag habitat for avoidance, biological monitoring
Effectiveness Criteria	California red-legged frogs and their habitat are avoided
Responsible Agency	Western
Timing	Construction and O&M

Table 6-1. Mitigation Monitoring and Reporting Program

<p>Mitigation Measure</p>	<p>MM BIO-14: Avoidance and minimization measures for California tiger salamander and western spadefoot. To protect California tiger salamander and western spadefoot, Western will implement the following measures.</p> <p>During construction activities:</p> <ul style="list-style-type: none"> ▪ California tiger salamander presence will be assumed in all aquatic habitats for which protocol surveys have not been conducted in the year prior to construction. Uplands within 1 mile (1.6 kilometers) will be assumed to be occupied around all aquatic habitats for which protocol surveys have not been conducted ▪ If the Project may affect California tiger salamander, take authorization/permits will be obtained from the USFWS. Upon completion of the authorization/permit process, Western will implement the terms and conditions of the authorizations. ▪ Transmission towers and new access roads will be sited as far from aquatic habitats as is feasible. ▪ To the extent feasible, construction activities will take place during the dry season (generally June 1 through September 30) within 1.24 miles (2 kilometers) of aquatic habitats. If construction extends into the wet season (generally October 1 through May 31), temporary exclusion fencing will be installed 100 feet (30.5 meters) out from work areas to prevent California tiger salamanders and western spadefoots from entering construction areas as necessary. ▪ Escape ramps will be installed in all trenches or excavations to allow wildlife to escape. ▪ Biological monitoring will be provided by an agency-approved biologist during construction in all areas within 1.24 miles (2 kilometers) of aquatic habitats. The biological monitor will identify, capture, and relocate sensitive amphibians present in work areas if necessary. ▪ A 300-foot (91-meter) setback, incorporating both riparian vegetation and uplands, will be provided on all sides of aquatic habitats identified as occupied or assumed occupied by California tiger salamanders and western spadefoots. A setback may be reduced or expanded in consultation with the USFWS depending on whether it would (a) affect habitat or (b) result in adverse impacts to the species or the biological values of the habitat. Setbacks will maintain existing vegetation free of disturbance and new construction, equipment storage, vehicle parking, and other activities that might compact or disturb soils or vegetation or that could introduce contaminants into aquatic habitats. Setbacks will be clearly delineated during the construction. ▪ Water quality will be maintained through implementation of appropriate erosion-control measures to reduce siltation and contaminated runoff from Project sites by maintaining vegetation within buffers and/or through the use of hay bales, filter fences, vegetative buffer strips, or other accepted equivalents. ▪ Construction and other ground disturbances will be prohibited within setbacks. The use of insecticides, herbicides, rodenticides and pesticides will occur in accordance with USEPA guidelines addressing the use of these materials in occupied California tiger salamander and western spadefoot habitat. ▪ Where aquatic sites cannot be avoided by 300 feet (91 meters) on all sides, an agency-approved biologist will survey the work site immediately prior to construction activities. If California tiger salamanders, larvae, or eggs are found, the approved biologist will contact USFWS to determine whether moving any of these life-stages is appropriate. In making this determination USFWS will consider whether an appropriate relocation site exists. If USFWS approves moving animals, the approved biologist will be allowed sufficient time to move California tiger salamanders and western spadefoots from the work site before work activities begin. Only USFWS-approved biologists will participate in activities associated with the capture, handling, and monitoring of California tiger salamanders. Bare hands will be used to capture salamanders and toads. USFWS-approved biologists will not use soaps, oils, creams, lotions, repellents, or solvents of any sort on their hands within two hours before and during periods when they are capturing and relocating individuals. To avoid transferring disease or pathogens from handling the amphibians, agency-approved biologists will follow the <i>Declining Amphibian Populations Task Force Fieldwork Code of Practice</i>. <p>During O&M activities:</p> <ul style="list-style-type: none"> ▪ A USFWS-approved biologist will identify potential California tiger salamander breeding habitat in the vicinity of O&M activities, and will flag a 500-foot buffer. The following restrictions will apply within the buffer: (1) only manual vegetation removal will be allowed; (2) only direct (e.g., injection and cut-stump) herbicide application methods will be allowed, except when otherwise restricted; (3) no ground disturbance (e.g., digging or augering) will be allowed; and (4) erosion-control devices will be of a material that will not entrap amphibians.
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Table 6-1. Mitigation Monitoring and Reporting Program

	<ul style="list-style-type: none"> ▪ If it is not feasible to follow the above-stated measures, a pre-activity survey will be conducted no more than 24 hours before O&M activities begin. If ground disturbance is required, a USFWS-approved biologist will identify potential CTS aestivation habitat (burrows, rock piles) within disturbance areas. CTS aestivation habitat will be avoided to the extent feasible. Ground disturbance will not occur in CTS breeding/aquatic habitat. If a burrow or other potential aestivation habitat must be impacted, a USFWS-approved biologist will determine if CTS are present within the burrow using an endoscope or other accepted detection method. If CTS are detected, the burrow will be avoided using a buffer determined appropriate by the biologist and a USFWS-approved monitor will remain on site to ensure that CTS are not impacted during Project activities in the vicinity. A USFWS-approved biologist will remain on site during all activities to ensure protection of CTS or an exclusion barrier will be constructed around the work site using USFWS-approved methods and materials. Exclusion materials will be removed at the end of the work activity. Crews will inspect any trenches left open for more than 24 hours for trapped animals. Only a USFWS-approved biologist will remove trapped animals.
Location	California tiger salamander and western spadefoot habitat
Monitoring/Reporting Action	Flag habitat for avoidance, conduct biological monitoring
Effectiveness Criteria	California tiger salamanders and western spadefoots and their habitat are avoided
Responsible Agency	Western
Timing	Construction and O&M
Mitigation Measure	<p>MM BIO-15: Provide compensatory mitigation for impacts to listed amphibians. Western will provide compensation for permanent and temporary construction impacts to California tiger salamander and California red-legged frog aquatic and upland habitat through one or more of the following: (a) purchasing credits at a conservation bank approved by CDFW and USFWS, (b) purchasing a conservation easement, (c) donating funds to an approved in-lieu fee program, or (d) restoring habitats affected by the Project. For onsite creation or restoration, Western will develop and implement a mitigation, monitoring, and reporting plan with input from and approval by regulatory agencies that outlines performance standards and success criteria for ensuring long-term success of mitigation.</p> <p>If Western intends to eliminate aquatic habitat including wetlands, ponds, springs, and other standing water sources, and to create new, onsite habitat, then the newly created habitat will be created and filled with water prior to dewatering and destroying the existing habitat. Dewatering and relocation of aquatic habitats should occur outside of the breeding season for red-legged frogs (approximately January through June).</p> <p>If Western intends to eliminate aquatic habitat including wetlands, ponds, springs, and other standing water sources, and will not create new, onsite habitat, then dewatering of existing habitat should occur prior to commencement of construction and other site-disturbing activities. Dewatering and relocation of aquatic habitats should occur outside of the breeding season for red-legged frogs (approximately January through June). Preserve lands acquired to offset impacts to the red-legged frog must have occupied habitat of at least equal habitat value as determined by the USFWS.</p>
Location	California tiger salamander and California red-legged frog aquatic habitat
Monitoring/Reporting Action	Report permanent and temporary habitat loss and compensation including habitat location and status
Effectiveness Criteria	Habitat is avoided or compensated
Responsible Agency	Western
Timing	Prior to construction

Table 6-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	<p>MM BIO-16: Avoidance and minimization measures for burrowing owl. Western will protect burrowing owls by implementing the following methods derived from the CDFW <i>Staff Report on Burrowing Owl Mitigation</i> (CDFG, 2012).</p> <p>During construction activities:</p> <ul style="list-style-type: none"> ▪ In coordination with CDFW, a burrowing owl protection and monitoring plan will be developed following guidelines in the updated CDFW staff report (CDFG, 2012). It will include but may not be limited to (a) conducting a protocol survey of the Project area the year before construction begins to identify sites of wintering and breeding activity, (b) identifying measures to avoid and minimize impacts, (c) identifying restrictions on construction activities and buffer distances related to time of year, (d) determining whether burrow exclusion or closure will be necessary, and developing a plan for implementation, (e) developing mitigation measures and a compensation plan for unavoidable impacts, (f) conducting a preconstruction survey, and (g) developing a mitigation and monitoring plan to ensure success of mitigation. Compensatory mitigation could include habitat restoration or contribution to a conservation bank. <p>During O&M activities:</p> <ul style="list-style-type: none"> ▪ From February 1 to August 31, Project construction, herbicide application (with the exception of direct application), and other O&M activities will be prohibited within 250 feet (76 meters) of potential burrowing owl nesting dens (ground squirrel burrows, culverts, concrete slabs, debris piles that could support nesting burrowing owls). From September 1 through January 31, disturbance will be prohibited within 160 feet (49 meters) of potential burrowing owl dens. ▪ OR a qualified biologist will conduct nesting and wintering surveys using methods described in California Burrowing Owl Consortium 1993, CDFG 2012, or currently accepted method. If nesting or wintering activity is detected, a CDFW-approved biologist will mark and monitor an appropriate non-disturbance buffer in the vicinity of burrows that have been active within the last three years. ▪ Within the buffer zone, all Project construction and O&M activities and herbicide applications will be prohibited from February 1 to August 31.
Location	Burrowing owl habitat
Monitoring/Reporting Action	Submit plan that describes avoidance or compensatory mitigation measures
Effectiveness Criteria	Burrowing owls and their habitat are avoided or compensated
Responsible Agency	Western
Timing	Prior to construction
Mitigation Measure	<p>MM BIO-17: Provide compensatory mitigation for impacts to occupied burrowing owl habitat. For unavoidable impacts to burrowing owl habitat known to be occupied within the last 5 years, compensatory mitigation will be required. Compensation may take the form of (a) acquiring and dedicating lands into conservation easements; (b) purchasing mitigation credits at compensation ratios that have been approved by the CDFW; or (c) preserving area contiguous or near the acreage lost. <u>To prevent hazards attributable to interactions between wildlife and aviation, the location of any conservation easement or habitat restoration for burrowing owl shall be located outside of any established Airport Influence Area.</u></p>
Location	Burrowing owl foraging and nesting habitat
Monitoring/Reporting Action	Report habitat loss and compensation status
Effectiveness Criteria	Habitat is avoided or compensated
Responsible Agency	Western
Timing	Prior to construction

Table 6-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	<p>MM BIO-18: Avoidance and minimization measures for California fully protected birds. To protect the California fully protected golden eagle and white-tailed kite, Western will implement the following measures. The nesting period for these species is March 1 through August 15.</p> <ul style="list-style-type: none"> ▪ For ground-breaking activities that begin outside the nesting season, a preconstruction nesting survey will not be necessary. For all ground-breaking activities that begin during the nesting season, a CDFW-approved biologist will conduct a preconstruction survey in suitable habitats for each species no more than 10 days prior to construction. The survey will encompass 0.5 miles (0.8 kilometers) in all directions from construction areas. If no nesting is detected, no further action will be required. ▪ During construction, if a golden eagle or white-tailed kite nest is detected, or if it is determined that courtship and nest initiation are underway within the survey distance, Western will establish a 0.5-mile (0.8-kilometer) no-disturbance buffer around the nest or center of activity. The buffer will be maintained until a CDFW-approved biologist has determined that the young have fledged or the nest is no longer active. If this buffer cannot feasibly be implemented, Western will contact and coordinate with CDFW well in advance of ground-disturbing activities (CDFW in litt. 2014c). ▪ During O&M, if a golden eagle or white-tailed kite nest is detected, or if it is determined that courtship and nest initiation are underway within 0.25 mile (0.4 kilometer), Western will establish a 0.25-mile (0.4-kilometer) no-disturbance buffer around the nest or center of activity; a smaller buffer may be established if a qualified biologist determines that the O&M activity will not adversely affect adults or young. ▪ When construction or O&M activities begin in a new area during the nesting season, another preconstruction survey will be completed as described above.
Location	Golden eagle and white-tailed kite habitat
Monitoring/Reporting Action	Flag nests for avoidance, biological monitoring
Effectiveness Criteria	Golden eagles and white-tailed kites are avoided
Responsible Agency	Western
Timing	Construction and O&M
Mitigation Measure	<p>MM BIO-19: Avoidance and minimization measures for least Bell's vireo. To protect least Bell's vireo, Western will implement the following measures.</p> <ul style="list-style-type: none"> ▪ Where any construction-related activity will take place within 1000 feet (305 meters) of potential least Bell's vireo habitat during the nesting season (mid-March through September), a protocol survey will be conducted by an agency-approved biologist, in coordination with the USFWS. If nesting least Bell's vireos are not detected, no further action is required for this species. If nesting is detected, Western will establish a clearly marked no-disturbance buffer of 1000 feet (305 meters) around the nest, or center of activity if the nest cannot be detected. The buffer will be maintained until the agency-approved biologist has determined that the nest is no longer active or that the young have fledged. ▪ Biological monitoring will be provided by an agency-approved biologist during construction in all areas within 1000 feet (305 meters) of occupied habitat. The biological monitor will ensure that construction activities do not disturb nesting vireos.
Location	Least Bell's vireo habitat
Monitoring/Reporting Action	Flag nests for avoidance, biological monitoring
Effectiveness Criteria	Nesting least Bell's vireos are avoided
Responsible Agency	Western
Timing	Construction and O&M

Table 6-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	<p>MM BIO-20: Avoidance and minimization measures for Swainson’s hawk. To protect nesting Swainson’s hawks, Western will implement the following measures pursuant to guidelines from CDFW (CDFG, 1994) and the Swainson’s Hawk Technical Advisory Committee (SWTAC, 2000); and pursuant to informal consultation for the Project initiated January 2014 (CDFW in litt. 2014c). The nesting season for Swainson’s hawks, which encompasses the courtship and nest initiation phase, is considered by CDFW to be February 1 through September 15.</p> <p>During construction activities:</p> <ul style="list-style-type: none"> ▪ An agency-approved biologist will conduct preconstruction surveys according to guidelines presented in SWTAC 2000, which establishes five survey periods. During the first period (January 1 to March 20) potential nest locations are identified. During the second period (March 20 to April 5) Swainson’s hawks are returning to traditional nesting territories during a time when most nest trees are leafless and birds and their activities are easier to detect. During the third period (April 5 to April 20) pair bonding, courtship, and nest construction are taking place and while nests may be more difficult to see, they can be inferred from increased activity. During the fourth period (April 20 to June 10) nests are difficult to detect and activity is low because adults are incubating. Surveys should not be initiated during the fourth period. During the fifth period (June 10 to July 30), young birds may be active and visible, and both adults are making many visits to the nest with prey. Three surveys will be completed in at least at least two of the survey periods immediately prior to Project initiation. Surveys will encompass the area within 0.5 miles (0.8 kilometers) of construction activities. ▪ In addition, if ground-disturbing activities are to take place during the breeding season (February 1 through September 15), the CDFW recommends that additional preconstruction surveys for active nests be conducted by a CDFW-approved biologist no more than 10 days prior to the start of construction. ▪ If an active Swainson’s hawk nest is found, a 0.5-mile (0.8-kilometer) no-disturbance buffer will be established around the nest. If such a buffer cannot feasibly be implemented, coordination with CDFW will occur well in advance of ground-disturbing activities and the acquisition of a state incidental take permit pursuant to Fish and Game Code section 2081(b) may be warranted. <p>During O&M activities:</p> <ul style="list-style-type: none"> ▪ From February 1 to September 15, a 0.25-mile buffer zone will be established and maintained around potential Swainson’s hawk nest trees, within which there will be no intensive disturbance (e.g., use of heavy equipment, power saws, chippers, cranes, or draglines). This buffer may be adjusted, as assessed by a qualified biologist, based on changes in sensitivity exhibited by birds over the course of the nesting season and the type of O&M activity performed (e.g., high noise or human activity such as mechanical vegetation maintenance versus low noise or human activity such as semi-annual patrols), or a qualified biologist will conduct nest surveys using methods described in SHTAC 2000 (or more current protocol) to determine absence. ▪ Within 0.25 mile of an active nest, routine O&M activities will be deferred until after the young have fledged or until it is determined by a CDFW-approved biologist that the activities will not adversely affect adults or young.
Location	Swainson’s hawk habitat
Monitoring/Reporting Action	Flag nests for avoidance, biological monitoring
Effectiveness Criteria	Nesting Swainson’s hawks are avoided
Responsible Agency	Western
Timing	Construction and O&M

Table 6-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	MM BIO-21: Provide compensatory mitigation for impacts to Swainson's hawk foraging habitat. Compensatory mitigation will be required for loss of Swainson's hawk foraging habitat using compensation ratios provided in CDFG 1994 (or more current document) or a ratio determined through coordination with CDFW. As provided in CDFW 2014c, compensatory mitigation for Swainson's hawk will also be required for loss of nest trees. <u>To prevent hazards attributable to interactions between wildlife and aviation, the location of any compensatory mitigation for Swainson's hawk shall be located outside of any established Airport Influence Area.</u>
Location	Swainson's hawk foraging and nesting habitat
Monitoring/Reporting Action	Report habitat loss and compensation status
Effectiveness Criteria	Habitat is avoided or compensated
Responsible Agency	Western
Timing	Prior to construction
Mitigation Measure	<p>MM BIO-22: Avoidance and minimization measures for tricolored blackbird. Tricolored blackbird nests colonially in a variety of densely vegetated habitats. The nesting season for tricolored blackbird is March 1 through August 15.</p> <p>During construction activities:</p> <ul style="list-style-type: none"> ▪ For ground-breaking activities that begin or take place outside the nesting season, a preconstruction nesting survey will not be necessary. For all ground-breaking activities that begin during the nesting season, a biologist experienced with tricolored blackbirds and their range of habitats will conduct a preconstruction survey no more than 10 days prior to construction. The survey will encompass 500 feet (152 meters) in all directions from construction areas. If no nesting is detected, no further action will be required. ▪ If nesting is detected, or if it is determined that courtship and nest initiation are underway within 500 feet (152 meters) of a construction or laydown area, Western will establish a clearly marked 500-foot (152-meter) no-disturbance buffer around the outer edges of the habitat. The buffer will be maintained until a CDFW-approved biologist has determined that the colony is no longer active. ▪ If tricolored blackbirds begin nesting near construction or laydown areas after construction has started, a clearly marked no-disturbance buffer will be established around the colony that is the maximum feasible size for the circumstances. The buffer will be maintained until the colony is no longer active. ▪ Biological monitoring will be provided by a CDFW-approved biologist during construction in all areas within 500 feet (152 meters) of occupied habitat. The biological monitor will ensure that construction activities do not disturb the colony. ▪ When construction begins in a new area during the nesting season, another preconstruction survey will be completed as described above. <p>During O&M activities:</p> <ul style="list-style-type: none"> ▪ From March 1 to August 15, herbicide application (with the exception of direct application) and vegetation clearing/disturbance will be prohibited in marshes, willows, and blackberry thickets OR a qualified biologist will conduct a nesting survey prior to O&M activities. If nesting activity is detected, a qualified biologist will mark and monitor an appropriate buffer zone around the nesting colony within which all O&M activities and herbicide applications will be prohibited from March 1 to August 15.
Location	Tricolored blackbird habitat
Monitoring/Reporting Action	Flag breeding colonies for avoidance, biological monitoring

Table 6-1. Mitigation Monitoring and Reporting Program

Effectiveness Criteria	Tricolored blackbird breeding colonies are avoided
Responsible Agency	Western
Timing	Construction and O&M
Mitigation Measure	<p>MM BIO-23: Avoidance and minimization measures for other special-status and native birds. To protect loggerhead shrike, long-eared owl, Modesto song sparrow, northern harrier, short-eared owl, yellow-headed blackbird, and other non-listed birds protected by the MBTA and California Fish and Game Code, Western will implement the following measures. The nesting season for these species is March 1 through August 31.</p> <ul style="list-style-type: none"> ▪ For ground-breaking activities that begin or take place outside the nesting season, a preconstruction nesting survey will not be necessary. For all ground-breaking activities that begin during the nesting season, a CDFW-approved biologist will conduct a preconstruction survey in suitable habitats for each of these species no more than 10 days prior to construction. The survey will encompass 250 feet (76 meters) in all directions from construction areas for loggerhead shrike, Modesto song sparrow, and yellow-headed blackbird, and 500 feet (152 meters) for long-eared owl, northern harrier, and short-eared owl. For species covered by the MBTA and California Fish and Game Code, but with no other special status, the survey area will encompass a sufficient area around the work site to identify nests that are present and determine their status. A sufficient area means any nest within an area that could potentially be affected by the Project. If no nesting is detected, no further action will be required. ▪ During construction, if nests of loggerhead shrike, long-eared owl, Modesto song sparrow, northern harrier, short-eared owl, or yellow-headed blackbird are detected, or if it is determined that courtship and nest initiation are underway within this survey distance, Western will establish a clearly marked 250-foot (76-meter) no-disturbance buffer around each nest or center of activity for loggerhead shrike, Modesto song sparrow, and yellow-headed blackbird, and a 500-foot (152-meter) buffer around each nest or center of activity for long-eared owl, northern harrier, and short-eared owl. Buffers will be maintained until a CDFW-approved biologist has determined that the young have fledged or the nest is no longer active. ▪ During O&M, if nests of loggerhead shrike, long-eared owl, Modesto song sparrow, northern harrier, short-eared owl, and/or yellow-headed blackbird are detected, or if it is determined that courtship and nest initiation are underway within the survey distance, Western will establish a clearly marked 250-foot (76-meter) no-disturbance buffer around each nest or center of activity for loggerhead shrike, Modesto song sparrow, and yellow-headed blackbird, and a 500-foot (152-meter) buffer around each nest or center of activity for long-eared owl, northern harrier, and short-eared owl; a smaller buffer may be established if the biologist determines that the O&M activity will not adversely affect adults or young. ▪ Identified nests will be surveyed prior to construction or O&M activities to establish a behavioral baseline. Once work commences, all nests of MBTA- and Fish and Game Code-covered birds that are not designated as any other special status will be monitored during work activities to detect any behavioral changes as a result of the Project. If behavioral changes are observed, the work causing that change will cease and CDFW and USFWS will be contacted for additional avoidance and minimization measures. OR, if monitoring of identified nests by an agency-approved wildlife biologist is not feasible, CDFW and USFWS recommend a minimum no-disturbance buffer of 250 feet (76 meters) around active nests of non-listed passerine-type bird species and a 500-foot (152-meter) no-disturbance buffer around the nests of non-listed raptors until the breeding season has ended, or until an agency-approved biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival. Variance from these no-disturbance buffers may be implemented when there is compelling biological or ecological reason to do so, such as when Project activities would be concealed from a nest site by topography. Any variance from these buffers will be supported by an agency-approved biologist and it is recommended that CDFW and USFWS be notified in advance of implementation of a no-disturbance buffer variance. ▪ When construction or O&M begins in a new area during the nesting season, another preconstruction survey will be completed as described above.
Location	Nesting bird habitats
Monitoring/Reporting Action	Flag nests for avoidance, biological monitoring, notify CDFW and USFWS of no-disturbance buffer variances
Effectiveness Criteria	Nesting birds are avoided

Table 6-1. Mitigation Monitoring and Reporting Program

Responsible Agency	Western
Timing	Construction and O&M
Mitigation Measure	<p>MM BIO-24: Avoidance and minimization measures for American badger. To protect American badger, Western will implement the following measures.</p> <ul style="list-style-type: none"> ▪ Concurrent with other required surveys (e.g., kit fox and burrowing owl), a CDFW-approved biologist will conduct a preconstruction survey to identify the presence of American badgers. If this species is not found, no further action will be required. If badgers are identified, they will be passively relocated using burrow exclusion (e.g., installing one-way doors on burrows) or similar CDFW-approved exclusion methods. In unique situations it might be necessary to actively relocate badgers (e.g., using live traps) to protect individuals from potentially harmful situations. Such relocation will be performed with advance CDFW coordination and concurrence. When unoccupied dens are encountered outside of work areas but within 100 feet (30.5 meters) of proposed activities, vacated dens will be inspected to ensure they are empty and temporarily covered using plywood sheets or similar materials. ▪ If badger occupancy is determined at a given site within a construction area, construction will be halted. Depending on the den type, reasonable and prudent measures to avoid harming badgers will be implemented and may include seasonal limitations on Project construction near the site (i.e., restricting the construction period to avoid spring-summer pupping season), establishing a construction exclusion zone around the identified site, or resurveying the den a week later to determine species presence or absence.
Location	American badger habitat
Monitoring/Reporting Action	Flag active dens for avoidance, biological monitoring
Effectiveness Criteria	Badgers and active dens are avoided
Responsible Agency	Western
Timing	Construction and O&M
Mitigation Measure	<p>MM BIO-25: Avoidance and minimization measures for special-status bats. To protect Townsend's big-eared bat and other special-status bats, Western will minimize impacts by performing preconstruction surveys and creating no-disturbance buffers around active bat-roosting sites, especially maternity roosts and especially during the bat pupping season (April 1 through August 15) for Project construction and O&M activities using the following measures.</p> <ul style="list-style-type: none"> ▪ Before construction or O&M activities within 250 feet (76 meters) of trees, cliffs, or caves, a CDFW-approved bat biologist will survey for special-status bats. If no evidence of bats (i.e., direct observation, guano, staining, or strong odors) is observed, no further mitigation will be required. If evidence of bats is observed, Western will implement the following measures to avoid potential impacts on breeding populations: <ul style="list-style-type: none"> – A no-disturbance buffer of 250 feet (76 meters) will be created around active bat roosts or occupied roosting habitat during the pupping season (April 1 through August 15). Bat roosts initiated during construction will be presumed to be unaffected by the indirect effects of noise and construction disturbances. However, the direct take of individuals will be prohibited without further coordination with CDFW. – Removal of trees showing evidence of active bat use will occur during the periods least likely to affect bats in winter hibernacula or maternity roosts, as determined by a CDFW-approved bat biologist (generally between August 15 and October 15, and between February 15 and April 1). If the exclusion of bats from potential roost sites is necessary to prevent indirect impacts due to construction noise and adjacent human activity, bat exclusion activities (e.g., installation of netting to block roost entrances) will be conducted by a CDFW-approved biologist.
Location	Active bat roosts
Monitoring/Reporting Action	Flag active roosts for avoidance, biological monitoring, exclude bats from potential roost sites

Table 6-1. Mitigation Monitoring and Reporting Program

Effectiveness Criteria	Active bat roosts are avoided
Responsible Agency	Western
Timing	Construction and O&M
Mitigation Measure	<p>MM BIO-26: Avoidance and minimization measures for special-status kangaroo rats. Western will either assume presence of giant and short-nosed kangaroo rats and implement measures to avoid or minimize impacts, or conduct research to assess habitat potential. Research could take the form of (a) evaluating the Project area using a model based on satellite imagery currently being applied to giant kangaroo rat habitats throughout their range (T. Bean pers. comm.) or other habitat models or (b) conducting protocol trapping in potentially suitable areas immediately prior to construction. If research indicates that kangaroo rats are not likely to be present, no further action will be required. If Western either assumes presence or research indicates that either kangaroo rat species could be present, Western will implement the following measures.</p> <ul style="list-style-type: none"> ▪ Prior to construction or O&M activities, any active burrows in the vicinity of work sites will be flagged and marked with a burrow number. Exclusion zones with a 30-foot (9-meter) radius will be established around any active burrow. Construction activities, with the exception of essential vehicle operation on existing roads and foot travel, will be prohibited within this exclusion zone. ▪ A biological monitor will be on site for all activities within suitable kangaroo rat habitat. Prior to construction or O&M activities each day within suitable habitat, the monitor will conduct a brief ground survey of the site to verify that no kangaroo rats are present within the site. The biological monitor will have the authority to stop and/or redirect Project activities in coordination with the project manager and Western's natural resources staff to ensure the protection of giant kangaroo rats. The biological monitor will complete daily reports/logs summarizing activities and environmental compliance. ▪ Installation of barrier fencing around the work site may be used to further limit the risk of direct impacts to kangaroo rats where necessary. Barrier fencing will at no time inhibit the kangaroo rat's ability to move between its den and other habitats that allow breeding, feeding, and sheltering. All barriers will be removed at the end of Project activities. ▪ If giant kangaroo rats are detected within a disturbance site, through coordination with USFWS and if necessary, they may be relocated to a suitable site away from Project activities but as close to the disturbance site as feasible. Relocation methods will follow the recommendations in Tennant et al. (2013) or other USFWS-approved methods.
Location	Giant kangaroo rat and short-nosed kangaroo rat habitats
Monitoring/Reporting Action	Report results of research assessing habitat potential, flag active burrows for avoidance, install barrier fencing to exclude animals from work areas, biological monitoring, submit daily reports summarizing activities and environmental compliance
Effectiveness Criteria	Giant kangaroo rats and short-nosed kangaroo rats and their active burrows are avoided
Responsible Agency	Western
Timing	Construction and O&M

Table 6-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	<p>MM BIO-27: Avoidance and minimization measures for San Joaquin kit fox. To protect San Joaquin kit fox, Western will implement the following measures.</p> <ul style="list-style-type: none"> ▪ To the extent feasible, Western will avoid Project construction and O&M activities that require ground disturbance or off-road travel between December 1 and May 31, the kit fox breeding/pupping season. ▪ Prior to Project construction or O&M activities that involve ground disturbance, off-road travel, or vegetation management in suitable kit fox habitat, an agency-approved biologist will conduct habitat/den surveys in accordance with the “Small Projects” recommendations in the 2011 USFWS Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (USFWS, 2011c). Any suitable den (i.e., burrow with an entrance greater than 4 inches in diameter) will be monitored for evidence of kit fox use by placing either a tracking medium or wildlife monitoring cameras at the entrance for at least three consecutive nights. Active dens will be marked with a 100-foot (30.5-meter) buffer and natal or pupping dens (December 1 through May 31) will be marked with a 1,000-foot (305-meter) buffer. Construction activities, with the exception of essential vehicle operation on existing roads and foot travel, will be prohibited within this buffer area. ▪ If activities must occur within 100 feet (30.5 meters) of an active den, San Joaquin kit foxes will be excluded from the den. Methods will follow those outlined in USFWS 2011c. The den will be monitored for at least five consecutive nights from initial observation to allow the animal to move to another den during its normal activity. Use of this den may be discouraged by partially plugging the den in such a manner that any resident animal can easily escape but may be discouraged from re-entering. Once the kit fox has abandoned the den or is still present after five or more consecutive days of partial plugging and monitoring, the den will be plugged or excavated (by hand as feasible) when the qualified biologist determines that the animal is absent due to normal activities. Natal dens will not be destroyed or disturbed during breeding/pupping season (December 1 through May 31). ▪ A biological monitor will be on site for any work activities within suitable kit fox habitat. Prior to construction activities each day, the monitor will conduct a brief ground survey of the site to verify that no kit foxes are present. The biological monitor will have the authority to stop and/or redirect Project activities in coordination with the project manager and Western’s natural resources staff to ensure the protection of kit foxes. The biological monitor will complete daily reports/logs summarizing activities and environmental compliance. ▪ Installation of barrier fencing around the work site may be used to further limit the risk of direct impacts on kit fox. If necessary, barrier fencing will be used to prevent kit foxes from entering the work site and getting injured or killed by equipment but will at no time inhibit the kit fox’s ability to move between its den and other habitats that allow breeding, feeding, and sheltering. All barriers will be removed at the end of construction or O&M work. ▪ Any excavated, steep-walled holes or trenches more than 2 feet (0.6 meter) deep will be covered at the close of each working day with plywood or similar materials or escape ramps will be installed in the hole or trench. Before any hole or trench is filled, it will be inspected for trapped animals. ▪ All construction pipes, culverts, or similar structures with a diameter of 4 inches (10 centimeters) or more that are stored at a construction site overnight will be thoroughly inspected for kit foxes before the pipe is buried, capped, or moved. If a kit fox is discovered inside a pipe, that section of pipe will not be moved until the kit fox has left the pipe. ▪ Use of rodenticides and herbicides in the Project area will be limited to the extent feasible. Use of any such compounds will observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other state and federal legislation. If rodent control must be conducted, zinc phosphide will be used as feasible because it presents a lower risk to kit foxes.
Location	San Joaquin kit fox habitat
Monitoring/Reporting Action	Flag habitat and dens for avoidance, biological monitoring, install exclusion fencing, submit daily reports summarizing activities and environmental compliance
Effectiveness Criteria	San Joaquin kit fox and dens are avoided; habitat is avoided or compensated
Responsible Agency	Western
Timing	Construction and O&M

Table 6-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	MM BIO-28: Provide compensatory mitigation for impacts to San Joaquin kit fox. Compensatory mitigation will be required for temporary and permanent impacts to San Joaquin kit fox habitat. Compensation may take the form of (a) acquiring and dedicating lands into conservation easements or (b) purchasing mitigation credits at compensation ratios that have been approved by state and federal agencies. Impacts within conservation easements may require compensatory mitigation at higher ratios than impacts outside of easements, and mitigation will be consistent with the requirements of the easement.
Location	San Joaquin kit fox habitat
Monitoring/Reporting Action	Report habitat loss and compensation status
Effectiveness Criteria	Habitat is avoided or compensated
Responsible Agency	Western
Timing	Prior to construction
Mitigation Measure	<p>MM BIO-29: Avoidance and Minimization Measures for Vernal Pool and Seasonal Wetland Habitats. During construction and O&M activities in the vicinity of vernal pools, vernal pool grasslands, and seasonal wetlands, Western will implement the following measures.</p> <p>During O&M Category A Activities (see Appendix D):</p> <ul style="list-style-type: none"> ▪ Vehicle access will be permitted only on well-established roads unless soils are dry. Soils will be considered sufficiently dry for vehicle access when they resist compaction, and after annual plants have set seed (generally June 1 to September 30, or as determined by qualified personnel based on personal observation of the soils). For patrolling the ROW off of established roads in a pickup truck, or for inspecting hardware on structures with a bucket truck, vernal pools, vernal pool grasslands, and seasonal wetlands will be avoided by 50 feet (15 meters) during the wet season (generally October 1 to May 31). No avoidance will be necessary if soils are completely dry. <p>During construction and O&M Category B and C activities (Appendix D) in the vicinity of vernal pools, vernal pool grasslands, and seasonal wetlands:</p> <ul style="list-style-type: none"> ▪ Vehicle access will be permitted only on well-established roads unless soils are dry. Soils will be considered sufficiently dry for vehicle access when they resist compaction, and after annual plants have set seed (generally June 1 to September 30, or as determined by an agency-approved biologist based on personal observation of the soils). If vegetation management activities were proposed within 250 feet (76 meters) of a vernal pool, vernal pool grassland, or seasonal wetland, an agency-approved biologist will be present at all times to ensure the protection of the work-area limits below OR qualified personnel will clearly flag or fence the limits of the work area, according to limits presented in the following, prior to the maintenance activity. (The herbicide restriction measures generated by the PRESCRIBE database supersede those below where they are different.) ▪ Mixing or application of pesticides, herbicides, or other potentially toxic chemicals will be prohibited. ▪ Herbicide application to target vegetation with hand-held applicator (cut-stump treatment) will be prohibited within 25 feet (7.6 meters) in the wet season (generally October 1 to May 31) and allowed up to the edge of the pool or seasonal wetland in the dry season (generally June 1 to September 30). ▪ Herbicide application with power sprayers for spot treatment and selective elimination of target species will be prohibited within 100 feet (30.5 meters) in any season. ▪ Broadcast herbicide application by vehicle with boom for treating large or dense areas of the ROW will be prohibited within 150 feet (45.7 meters) in any season. ▪ Manual clearing of vegetation (chainsaw, axe, clippers) will be allowed up to the edge of the pool or seasonal wetland in the wet season (generally October 1 to May 31); a buffer will not be necessary in the dry season (generally June 1 to September 30). ▪ Mechanical clearing of vegetation (heavy-duty mowers, crawler tractors, or chippers) will be prohibited within 100 feet (30.5 meters) in the wet season (generally October 1 to May 31); a buffer will not necessary in the dry season (generally June 1 to September 30).

Table 6-1. Mitigation Monitoring and Reporting Program

	<ul style="list-style-type: none"> ▪ For ground-disturbing activities, a 50-foot (15-meter) wet season or 25-foot (7.6-meter) dry season buffer zone from the edge of the vernal pool or wetland will be maintained and the vernal pool or wetland will be protected from siltation and contaminant runoff by use of erosion control. Erosion-control materials will be of a tightly woven natural fiber netting or similar material that will not entrap reptiles and amphibians (e.g., coconut coir matting). No monofilament plastics will be used for erosion control near vernal pools and seasonal wetlands. Erosion-control measures will be placed between the outer edge of the buffer and the activity area. All fiber rolls and hay bales used for erosion control will be certified as free of noxious weed seed. If work must occur within the buffer, the disturbance will not alter the hydrologic integrity of the wetland. ▪ For activities such as installation or repair of underground components (water, power, communication, or ground electrical line) or soil borings, a 250-foot (76-meter) buffer zone will be maintained. A smaller buffer could be approved after a site assessment by an agency-approved biologist, but must include silt fencing or other sediment control, to be established no less than 50 feet (15 meters) from the wetland boundary. If work must occur within the buffer, the disturbance will not alter the hydrologic integrity of the wetland.
Location	Vernal pools, vernal pool grasslands, and seasonal wetlands
Monitoring/Reporting Action	Flag for avoidance, conduct biological monitoring
Effectiveness Criteria	Effects to vernal pools, vernal pool grasslands, and seasonal wetlands are avoided or minimized
Responsible Agency	Western
Timing	Construction and O&M

Table 6-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	<p>MM BIO-30: Avoidance and Minimization Measures for Sensitive Wetland Habitats. During construction and O&M activities in the vicinity of seeps, springs, ponds, lakes, rivers, streams, and marshes, and their associated habitats, Western will implement the following measures.</p> <p>During O&M Category A activities (see Appendix D):</p> <ul style="list-style-type: none"> ▪ The following activities will be prohibited at all times within 100 feet (30.5 meters) of a seep, spring, pond, lake, river, stream, or marsh, and their associated habitats: <ul style="list-style-type: none"> – vehicle access, except on existing access and maintenance roads – dumping, stockpiling, or burying of any material – mixing of pesticides, herbicides, or other potentially toxic chemicals – open petroleum products <p>During construction and O&M Category B and C activities (see Appendix D):</p> <ul style="list-style-type: none"> ▪ The following activities will be prohibited at all times within 100 feet (30.5 meters) of a seep, spring, pond, lake, river, stream, or marsh, and their associated habitats: <ul style="list-style-type: none"> – vehicle access, except on existing access and maintenance roads – dumping, stockpiling, or burying of any material, except as required for specific O&M activities such as rip-rap – mixing of pesticides, herbicides, or other potentially toxic chemicals – open petroleum products ▪ For vegetation management or maintenance within 100 feet (30.5 meters) of any seep, spring, pond, lake, river, stream, or marsh, or any of their associated habitats, the following work-area limits will be provided (the herbicide restriction measures generated by the PRESCRIBE database supersede those below where they are different): <ul style="list-style-type: none"> – Only manual clearing of vegetation will be permitted – Foliar application of herbicides will be prohibited. Only cut-stump treatments of target vegetation will be allowed using herbicide approved for aquatic use by the EPA and in coordination with the appropriate land manager. ▪ For ground-disturbing activities, a 100-foot (30.5-meter) buffer zone will be maintained from the edge of the seep, spring, pond, lake, river, stream, marsh, or their associated habitats for protection from siltation and runoff of contaminants by use of erosion-control measures. If work must occur within the buffer, the disturbance will not alter the hydrologic integrity of the wetland. Erosion-control materials will be of a tightly woven natural fiber netting or similar material that will not entrap reptiles and amphibians (e.g., coconut coir matting). No monofilament plastics will be used for erosion control near seeps, springs, ponds, lakes, rivers, streams, or marshes. Erosion-control measures will be placed between the outer edge of the buffer and the activity area. All fiber rolls and hay bales used for erosion control will be certified as free of noxious weed seed. ▪ Western will obtain applicable section 404 discharge and 401 water-quality permits prior to any maintenance activities that must take place within jurisdictional wetlands or other waters of the U.S. These will be coordinated with USACE and RWQCB as needed. ▪ Dewatering work for maintenance operations adjacent to or encroaching on seeps, springs, ponds, lakes, rivers, streams, or marshes will be conducted to prevent muddy water and eroded materials from entering the water or marsh. ▪ All stream crossings will be constructed such that they reduce the potential for stream flows to result in increased scour, washout, or disruption of water flow. To the extent feasible, stream crossings will be located in stream segments without riparian vegetation, and structure footings will be installed outside of stream banks. Should Western need to modify existing access roads or install new access roads, they will be built at right angles to streams and washes to the extent feasible. Trees providing shade to water bodies will be trimmed only to the extent necessary and will not be removed unless they presented a specific safety concern.
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Table 6-1. Mitigation Monitoring and Reporting Program

	<ul style="list-style-type: none"> ▪ Trees that must be removed will be felled to avoid damaging riparian habitat. They will be felled out of and away from the stream maintenance zone and riparian habitat, including springs, seeps, bogs, and any other wet or saturated areas. Trees will not be felled into streams in a way that will obstruct or impair the flow of water, unless instructed otherwise. Tree removal that could cause streambank erosion or result in increased water temperatures will not be conducted in and around streams. Tree removal in riparian or wetland areas will be done only by manual methods.
Location	Seeps, springs, ponds, lakes, rivers, streams, and marshes, and their associated habitats
Monitoring/Reporting Action	Flag for avoidance, conduct biological monitoring
Effectiveness Criteria	Effects to sensitive wetlands habitats are avoided or minimized
Responsible Agency	Western
Timing	Construction and O&M
Mitigation Measure	<p>MM BIO-31: Provide compensatory mitigation for impacts to sensitive plant communities. Western will purchase credits in an appropriate mitigation bank or habitat conservation bank for the vegetation community to be impacted. If a mitigation bank is not available Western will contribute in-lieu fees to a mitigation bank or habitat conservation bank that can provide appropriate mitigation for the vegetation type. Western will work with the appropriate resource agency (USFWS or CDFW) to ensure adequate compensation.</p> <p>If no mitigation bank, conservation bank, or in-lieu-fee compensation is available then Western will prepare a mitigation, monitoring, and reporting plan that describes the compensatory mitigation measures that will be implemented for these vegetation communities. The mitigation plan will be submitted to the CDFW for approval and will outline performance standards and success criteria for ensuring long-term success of mitigation.</p> <p>Impacts within conservation easements may require compensatory mitigation at higher ratios than impacts outside of easements, and mitigation will be consistent with the requirements of the easement.</p>
Location	Special-status vegetation communities
Monitoring/Reporting Action	Report habitat loss and compensation status
Effectiveness Criteria	Habitat is avoided or compensated
Responsible Agency	Western
Timing	Prior to construction

Table 6-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	MM BIO-32: Provide compensatory mitigation for impacts to wetlands and waters. Compensation for loss of wetlands and waters will depend on habitat value and integrity, and may take the form of creation, restoration, enhancement, or preservation. Federal and state agencies have a no-net-loss of wetlands policy, which requires that any permanent loss of wetlands be mitigated. Mitigation can be accomplished through purchase of credits in an approved wetland mitigation bank or contribution of in-lieu fees to a conservation bank or other conservation organization that will create the wetlands as mitigation/compensation for impacts from the Project. If these options are not available then mitigation will be accomplished by the creation of new wetlands on site or in an appropriate off-site location. For creation of new wetlands, Western will develop and implement a wetland mitigation, monitoring, and reporting plan in compliance with USACE and RWQCB guidelines. The plan will outline performance standards and success criteria for ensuring long-term success of mitigation. All newly created wetlands must be monitored and maintained for a minimum of 5 years to ensure achievement of performance standards and success criteria. Annual reporting to the USACE and RWQCB are required as part of monitoring.
Location	Wetlands and waters of the U.S. and State
Monitoring/Reporting Action	Report habitat loss and compensation status
Effectiveness Criteria	Wetlands and waters of the U.S. and State are avoided or compensated
Responsible Agency	Western
Timing	Prior to construction
Mitigation Measure	MM BIO-33: Minimization measures for conservation easements. Western will consult with easement holders and implement measures to avoid or minimize impacts to any existing or pending conservation easements along the Project alignment, to ensure that the Project does not conflict with the provisions of any conservation easements or otherwise impair or interfere with the conservation values of the easement property. For both construction and O&M activities, Western will minimize ground disturbance and will provide compensation at the required ratios for each easement, as applicable. Minimization measures can include, but not be limited to, siting staging and storage areas outside of easement boundaries, limiting ground disturbance to the minimum feasible area, limiting Project personnel within the easement property to only those actively required at any given time during both construction and O&M, and minimizing the duration of work within the easement during construction and O&M. Where a conservation easement prohibits new ground disturbance, Western will minimize impacts by attempting to span covered areas, routing around easement boundaries, or other methods developed through consultation with the easement holder, including amending the easement agreement to allow and compensate for construction, operation and maintenance of the Proposed Project.
Location	Existing or pending conservation easements
Monitoring/Reporting Action	Minimize impacts to conservation easements and/or amend agreement
Effectiveness Criteria	Project is consistent with easement agreement
Responsible Agency	Western
Timing	Prior to construction

Table 6-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	<p>MM CUL-1: Prepare and Implement Archaeological Resource Management and Treatment Plan for Unique Archaeological Resources. In the case of the inadvertent discovery of a unique archaeological resource, Western will have a Secretary of Interior–qualified archaeologist prepare and implement an Archaeological Resource Management and Treatment Plan that specifies the treatment of the resources. Prior to implementation, this document shall be submitted for review to the Authority as CEQA Lead Agency. This plan shall be tailored to the specific needs of the project area and the particular resources present there. The proposed Archaeological Resources Management and Treatment Plan must minimally address the following:</p> <ul style="list-style-type: none"> ▪ A general research design shall be developed that: <ul style="list-style-type: none"> – Charts a timeline of all research activities. – Recapitulates any existing paleoenvironmental, prehistoric, ethnohistoric, ethnographic, and historic contexts to create a comprehensive historic context for the project vicinity. – Poses research questions and testable hypotheses specifically applicable to the resource types encountered. – Clearly articulates why it is in the public interest to address the research questions that it poses. ▪ Artifact collection, retention/disposal, and curation policies shall be discussed, as related to the research questions formulated in the research design. These policies shall apply to archaeological materials and documentation resulting from evaluation and data recovery of unique archaeological resources. ▪ Person(s) expected to perform each of the tasks, their responsibilities, and the reporting relationships between project construction management and the mitigation and monitoring team shall be identified. ▪ The manner in which Native American observers or monitors shall be included, the procedures to be used to select them, and their roles and responsibilities shall be described. ▪ All impact-avoidance measures (such as flagging or fencing) to prohibit or otherwise restrict access to sensitive resource areas that are to be avoided during ground disturbance, construction, and/or operation shall be described. Any areas where these measures are to be implemented shall be identified. The description shall address how these measures would be implemented prior to the start of ground disturbance and how long they would be needed to protect the resources from project-related impacts. ▪ The commitment to curate of all archaeological materials retained as a result of the archaeological investigations (survey, testing, data recovery), in accordance with CEQA Lead Agency requirements and the California State Historical Resources Commission’s <i>Guidelines for the Curation of Archaeological Collections (HRC, 1993)</i>, into a retrievable storage collection in a public repository or museum shall be stated.
Location	Area surrounding archaeological materials.
Monitoring/Reporting Action	Notify Western’s Regional Preservation Officer (RPO), prepare and implement archaeological resource management and treatment plan.
Effectiveness Criteria	Treatment and reporting of archaeological resource completed in accordance with best practices and the standards set forward by the California Office of Historic Preservation in “Guidelines for Archaeological Research Designs” and the Secretary of the Interior’s “Standards for Archeological Documentation.”
Responsible Agency	Western
Timing	Construction and O&M

Table 6-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	MM CUL-2: Treatment of Inadvertent Discovery of Human Remains. If human remains are encountered, Western's Regional Preservation Official (RPO) and the relevant county coroner shall be notified within 24 hours of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie potential remains shall occur until the relevant county coroner has determined the appropriate treatment and disposition of the human remains. If the coroner determines that the remains are or are believed to be Native American, they will contact the NAHC, who will notify a designated most likely descendant (MLD). The MLD will inspect the site and will determine, in consultation with the property owner and Western's RPO, the disposition of the remains.
Location	Area surrounding human remains.
Monitoring/Reporting Action	Perform appropriate treatment of human remains in accordance with professional ethics and California regulations.
Effectiveness Criteria	<ul style="list-style-type: none"> • The removal of the human remains performed in a scientific manner that minimizes damage to the remains. • The process of removing the remains and eventual disposition of the remains occurs in a way that satisfies all involved parties.
Responsible Agency	Western
Timing	Construction and O&M
Mitigation Measure	MM GEO-1: Conduct Geotechnical Investigations and Implement Project Design Recommendations. A California-registered Professional Geotechnical Engineer shall evaluate the potential for geotechnical hazards and unstable slopes on the centerline route and areas of new road construction or widening of roads with slopes with more than a 15 percent gradient. Geological hazards shall be evaluated during final design specification for each structure location and road construction area. Project design recommendations will include measures to stabilize and protect Project structures from geologic hazards. Geologically unstable sites will be avoided or stabilized prior to construction. Additionally, expansive soils (such as vertisols) will be avoided or stabilized prior to tower installation.
Location	Entire Project area
Monitoring/Reporting Action	Report results of geotechnical investigations.
Effectiveness Criteria	Geotechnical hazards and unstable slopes are avoided or stabilized
Responsible Agency	Western
Timing	Prior to construction
Mitigation Measure	MM LU-1: Minimize impacts within conservation easements and/or amend conservation easements. <u>Prior to commencing construction on any parcel protected by a conservation easement, Western will consult with the governmental agencies or non-governmental organizations involved in managing the parcel to determine whether construction, maintenance or operation of the Proposed Project is a compatible use within the conservation easement. The consultation shall include the agency that is managing the easement (easement grantee, such as the California Department of Fish and Wildlife), the agency or organization charged with management of the properties (easement grantor, such as CCWD or the Nature Conservancy) and any other agency involved in assuring that the conservation values of the properties are not significantly impacted (participating agencies, such as the U.S. Fish and Wildlife Service). If such activities are deemed incompatible with the provisions of the conservation easement agreement, Western will attempt to minimize conducting any prohibited activities on the property, or work with the grantor, grantee and participating agencies to amend the agreement to allow and compensate for any significant impact to conservation values resulting from construction, operation and maintenance of the Proposed Project.</u>
Location	<u>Existing or pending conservation easements</u>

Table 6-1. Mitigation Monitoring and Reporting Program

<u>Monitoring/Reporting Action</u>	<u>Minimize impacts to conservation easements and/or amend agreement</u>
<u>Effectiveness Criteria</u>	<u>Project is consistent with easement agreement</u>
<u>Responsible Agency</u>	<u>Western</u>
<u>Timing</u>	<u>Prior to construction</u>
Mitigation Measure	MM NOISE-1: Provide construction notification. Notice shall be mailed no less than 15 days prior to construction to all residents, property owners, businesses, and public agencies that have facilities within 500 feet of the project area. The notice shall state the type of construction activities that will be conducted, and the location and duration of construction.
Location	Within 500 feet of the Project Area.
Monitoring/Reporting Action	Notify affected parties.
Effectiveness Criteria	All parties are notified 15 days prior to construction.
Responsible Agency	Western
Timing	Construction
Mitigation Measure	MM NOISE-2: Implement Best Management Practices for construction noise. Western shall implement the following noise-suppression techniques during construction and major maintenance activities to avoid violations of local noise ordinances and minimize exposure of noise-sensitive receptors. <ul style="list-style-type: none"> ▪ Confine construction noise to daytime, weekday hours (7:00 AM to 7:00 PM) or an alternative schedule established by the local jurisdiction or land manager in areas within 1,000 feet of a sensitive receptor. ▪ All vehicles and equipment would be equipped with noise suppression devices that are no less effective than those originally installed by the manufacturer. ▪ Place construction equipment and route construction traffic away from sensitive receptors where feasible. ▪ Minimize unnecessary construction vehicle use and idling time.
Location	Entire Project area
Monitoring/Reporting Action	Report compliance and construction schedule to the appropriate local jurisdictions.
Effectiveness Criteria	Local noise ordinances are not violated.
Responsible Agency	Western
Timing	Construction and O&M

Table 6-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	MM PALEO-1: Conduct Preconstruction Survey. A qualified paleontologist will be retained to conduct a field reconnaissance survey of the Project area prior to any ground-disturbing activities. Any required permits will be obtained prior to the survey. Survey areas will include the entire corridor right-of-way, plus any additional easements, such as for substations, work or storage areas, or access roads. The purpose of the field survey will be to visually inspect the ground surface for exposed fossils or traces thereof and to evaluate geologic exposures for their potential to contain preserved fossil material at the subsurface. Only Project areas (as defined above) classified as having a PFYC Class 3 or higher will be subject to a pedestrian survey. Particular attention will be paid to rock outcrops, both inside and in the vicinity of the Project area, where accessible, and any areas where geologic sediments are well exposed. Areas determined to have a PFYC Class 1 or 2, or areas that are heavily disturbed or otherwise obscured by heavy vegetation will not require a field survey. Where possible, activities and structures should be located in areas of lower sensitivity for encountering paleontological resources.
Location	Entire Project area
Monitoring/Reporting Action	Document results of field reconnaissance surveys and permit acquisition.
Effectiveness Criteria	Impacts to scientifically important paleontological resources are avoided during ground-disturbing activities.
Responsible Agency	Western
Timing	Prior to construction, Construction
Mitigation Measure	MM PALEO-2: Document all Finds. All fossil occurrences observed during the course of fieldwork, significant or not, will be documented and recorded at the time of discovery. The data collected for each fossil occurrence should include, at a minimum, the following information: Universal Transverse Mercator (UTM) coordinates, approximate elevation, description of taxa, lithologic description, and stratigraphic context (if known). In addition, each locality will be photographically documented with a digital camera. If feasible, with prior consent of the landowner(s), all significant or potentially significant fossils will be collected at the time they are observed in the field. If left exposed to the elements, fossil materials are subject to erosion and weathering. If the fossil discovery is too large to collect during the survey (e.g., a dinosaur skeleton or bone bed) and requires a large-scale salvage effort, then it will be documented and a mitigation strategy will be devised pursuant to SVP (2010) guidelines.
Location	Entire Project area
Monitoring/Reporting Action	Document and record fossil occurrences at the time of discovery. If feasible and with prior consent, collect fossils at the time they are observed.
Effectiveness Criteria	Impacts to scientifically important paleontological resources are avoided during ground-disturbing activities.
Responsible Agency	Western
Timing	Prior to construction, Construction
Mitigation Measure	MM PALEO-3: Conduct Worker's Environmental Awareness Training. Prior to the start of Project activities, all field personnel will receive worker's environmental awareness training on paleontological resources. The training will provide a description of the fossil resources that may be encountered in the Project area, outline steps to follow in the event that a fossil discovery is made, and contact information for the Project Paleontologist and on-site monitor(s). The training will be developed by the Project Paleontologist and may be conducted concurrent with other environmental training (e.g., cultural and natural resources awareness training, safety training, etc.).
Location	Designated training facility

Table 6-1. Mitigation Monitoring and Reporting Program

Monitoring/Reporting Action	Document completion of training for each field personnel.
Effectiveness Criteria	All field personnel receive adequate worker's environmental awareness training on paleontological resources.
Responsible Agency	Western
Timing	Prior to construction, Construction, and O&M
Mitigation Measure	<p>MM PALEO-4: Conduct Paleontological Mitigation Monitoring. Prior to the commencement of ground-disturbing activities, a qualified and professional paleontologist will be retained to prepare and implement a Paleontological Resource Mitigation Plan for the Project. Initially, full-time monitoring will be required during ground-disturbing activities in the areas of the Project with a recommended paleontological resource potential of Class 4 or higher (i.e., Panoche Formation, Moreno Formation, Oro Loma Formation, Briones Formation, Neroly Formation, Tulare Formation, and Quaternary older alluvium). Part-time monitoring or spot checking will occur in areas of the Project underlain by geologic units with a recommended paleontological resource potential of Class 3. In addition, spot checking will also occur in Project areas underlain by Quaternary alluvial deposits in order to determine if underlying sensitive geologic units are being impacted by construction, and at what depth.</p> <p>Monitoring will entail the visual inspection of excavated or graded areas and trench sidewalls. In the event that a paleontological resource is discovered, the monitor will have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance and collected. Monitoring will include matrix screening for the presence of microfossils and the frequency of which will be determined by the Project Paleontologist.</p> <p>Monitoring is largely a visual inspection of sediments; therefore, the most likely fossils to be observed will be macrofossils of vertebrates (bones, teeth, tusk) or invertebrates (shells). At the discretion of the Project Paleontologist, the monitor will periodically screen sediments to check for the presence of microfossils that can be seen with the aid of a hand lens (i.e., microvertebrates). Should microvertebrate fossils be encountered during the screening process, then bulk matrix samples will be taken for processing off site. For each fossiliferous horizon or paleosol, a standard sample (4.0 cubic yards or 6,000 pounds) will be collected for subsequent wet-screening per SVP (2010) guidelines.</p>
Location	Entire Project area
Monitoring/Reporting Action	Document preparation and implementation of Paleontological Resource Mitigation Plan. Document and report results of monitoring.
Effectiveness Criteria	Impacts to scientifically important paleontological resources are avoided during ground-disturbing activities.
Responsible Agency	Western
Timing	Prior to construction, Construction, and O&M

Table 6-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	<p>MM PALEO-5: Procedures for Fossil Preparation, Curation, and Reporting. Upon completion of fieldwork, all significant fossils collected will be prepared for curation. Preparation will be done in a properly equipped paleontology laboratory and will include the removal of excess matrix from fossil materials, and stabilizing and repairing specimens, as necessary. Following laboratory work, all fossil specimens will be identified to the lowest taxonomic level, cataloged, analyzed, and curated. The fossil specimens must be delivered to the accredited museum repository identified on the permit and receipt(s) of collections will be submitted to Western. This delivery will be made as soon as practical but no later than 60 days after all fieldwork is completed. The cost of curation is assessed by the repository and will be the responsibility of Western.</p> <p>At the conclusion of laboratory work and museum curation, a Paleontological Mitigation Report will be prepared describing the results of the paleontological mitigation monitoring efforts associated with the Project. The report will include a summary of the field and laboratory methods, an overview of the Project area geology and paleontology, a specimen inventory of all taxa recovered (if any), an analysis of fossils recovered (if any) and their scientific significance, the signed receipt of confirmation of museum deposition, and recommendations. The report will be submitted to the designated repository, Western, and any other interested state or federal agencies involved within 45 days following completion of monitoring and laboratory work.</p>
Location	Entire Project area
Monitoring/Reporting Action	Obtain permit and deliver all significant fossils collected to the accredited museum repository identified on the permit. Submit Paleontological Mitigation Report to the designated repository and any other interested state or federal agencies involved within 45 days following completion of monitoring and laboratory work.
Effectiveness Criteria	Proper treatment of significant fossils is maintained upon completion of all fieldwork.
Responsible Agency	Western
Timing	Prior to construction, Construction, and O&M
Mitigation Measure	<p>MM REC-1: Coordinate with local agencies to identify tower locations. Western shall coordinate with the CDPR regarding transmission line structure locations within the SLRSRA boundary to minimize conflicts with planned recreation areas and facility management.</p>
Location	Entire Project area
Monitoring/Reporting Action	Provide project design specifications to affected local agencies and incorporate recommendations from affected agencies to the extent possible.
Effectiveness Criteria	Conflicts with proposed recreation or facility management are avoided or minimized.
Responsible Agency	Western
Timing	Prior to construction
Mitigation Measure	<p>MM REC-2: Modify existing facilities within and relocate, if necessary, the entrance to the Jasper Sears OHV Use Area. Western shall coordinate with Reclamation and CDPR to identify modifications to existing facilities within the Jasper Sears OHV Use Area necessary to facilitate continued operation of the Jasper Sears OHV Use Area. In the case that the new Los Banos West Substation renders the existing entrance to the OHV use area unusable, Western shall coordinate with Reclamation and CDPR to relocate the entrance to provide continued access to the OHV use area. Modifications to the Jasper Sears OHV Use Area, including a new entrance as necessary, shall be operational before construction begins within the OHV use area.</p>
Location	Jasper Sears OHV Use Area
Monitoring/Reporting Action	Provide project design specifications to affected local agencies and incorporate necessary modifications to existing facilities to the extent possible.

Table 6-1. Mitigation Monitoring and Reporting Program

Effectiveness Criteria	Jasper Sears OHV Use Area continues to operate
Responsible Agency	Western
Timing	Prior to construction
Mitigation Measure	<p>MM TRAFFIC-1: Prepare and Submit Traffic Control Plans. Prior to the start of construction, Western would submit traffic control plans to all agencies with jurisdiction of public roads that would be affected by construction activities. The plans will include details on work schedule, associated truck traffic and commuter traffic for all portions of the project. Plan requirements include:</p> <ul style="list-style-type: none"> ▪ Coordinating with the affected jurisdictions on construction hours of operation. ▪ Following guidelines of the local jurisdiction for road closures caused by construction activities. ▪ Installing traffic control devices as specified in the California Department of Transportation's (Caltrans') Manual of Traffic Controls for Construction and Maintenance Works Zones (California Department of Transportation, 1996). ▪ Notifying the public of road closures in the immediate vicinity of the construction zone and/or of temporary closures of bike lanes, and recreation trails. ▪ Providing access to driveways and private roads outside the immediate construction zone. ▪ Monitoring road and bike lane damage and repairing roads and bike lanes damaged during construction, or providing compensation for damage to roadways and bikeways. ▪ Coordinating with Caltrans and the California Highway Patrol for stringing transmission line conductors and fiber over interstate or state highways, an activity that would require close coordination with these agencies to minimize hazards to workers and the public.
Location	Entire Project area
Monitoring/Reporting Action	Submit traffic control plans to all agencies with jurisdiction of public roads that would be affected by construction activities.
Effectiveness Criteria	Traffic-related impacts are avoided or minimized through implementation of Traffic Control Plans.
Responsible Agency	Western
Timing	Prior to construction