

Project title: 2016 Access Road Erosion Repair Along the Path 500 kV T-Line

Requested By: Tish Saare

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Date Submitted: 4-22-16

Date Required: 4-27-16

Description of the Project:

Site reconnaissance for the Path 15 Erosion Project was conducted (re-visited) during the spring and summer of 2010. Twelve sites were identified as “High Priority”, meaning that erosion damage was impairing or preventing access along the roads, making travel hazardous, and/or threatening the integrity of transmission line structures. Several additional sites were identified as “Moderate Priority” as defined by the likelihood that development of erosion features, if left unchecked, would most likely impair or prevent access along the roads or threaten the integrity of transmission line structures in the near future. A number of other erosion features were categorized as “Low Priority” based on a potential that further development of these features could eventually impair access or threaten structures.

After consultation with the USFWS, the “High Priority” sites were repaired in 2012 and the “Medium Priority” sites were addressed in 2014. Western plans to address the “Low Priority” sites during the summer/fall of 2016. Many of these “Low Priority” sites have degraded further and require repair in order to maintain access road or tower integrity.

Western proposes to repair erosion problems at these sites during the summer and fall of 2016. Construction is scheduled to begin in July 2016. These sites are located along the Path 15 transmission line and access roads between tower 42-1 and tower 55-4 within the ‘Monocline Ridge, Levis, and Lillis Ranch, California’ 7.5 minute USGS topographic quadrangles.

Erosion repair work will be conducted at six sites and two staging areas will be used. Total non-native grassland/sage brush habitat disturbance is summarized in the table below for each site.

Erosion Repair Areas Outside Tower Pads and Road Prisms (in acres)

Site Number	Temporary Impacts	Permanent Impacts
42B	0.00	0.00
43AA	0.29	0.09
44A	0.00	0.00
45C	0.00	0.00
52A	0.00	0.00
55A	0.00	0.00
Staging Area M43	0.48	0.00
Staging Area Kamm Road	0.49	0.00

Site Number	Temporary Impacts	Permanent Impacts
Total	1.26	0.09

Methods of Repair

A range of methods to repair existing damage and to control further erosion were developed, based on site conditions and experiences with erosion repair approaches utilized during previous repair efforts. The following paragraphs discuss methods of repairing and mitigating erosion damage in the roadway, in transmission line structure pads, and adjacent to the roadways where applicable:

Full Depth Road Repair and Aggregate Surfacing

This method of repairing erosion damage within the roadway consists of over-excavating washed-out areas and backfilling with compacted earth. Crushed aggregate surfacing would then be placed and compacted in order to prevent water from saturating the subgrade and beginning the process of collapse and erosion.

Riprap

Riprap, consisting of large, durable rock (typically 4 to 8 inches in diameter), would be placed where needed to dissipate the velocity of runoff and prevent erosion. The riprap would be installed over a gravel blanket and a separation geotextile in order to prevent runoff from contacting the native soil at velocities that would induce erosion.

Road Prism Construction

Past road maintenance activities have consisted of blading the traveled way to smooth rough areas. However, this practice has created many areas in which the road surface is now depressed below the adjacent ground surface and functions as a water channel during storm events. These conditions concentrate runoff and contribute to erosion. Installing ditches and building up the road prism to establish positive drainage patterns improves road performance and durability. The addition of crushed aggregate surfacing further improves stability.

Road Grading

Shallow erosion features in the roadway may be reworked using a motor grader. Care must be taken to establish proper drainage.

Ditch Construction/Channelization

Ditches or channels may be used to direct runoff away from sensitive areas. These channels may be lined with riprap to reduce the erosive effects of storm water.

Water Bars

Water bars are dips placed in the road to intercept runoff and direct it off of the roadway. Water bars are placed at intervals designed to prevent runoff from gaining enough velocity to cause erosion.

Low Water Crossings

Low water crossings, armored with riprap, may be used in lieu of culverts in order to provide an open channel cross section for varying storm water flows while maintaining a drivable surface during low or nonexistent flows.

Berms

Berms may be used to intercept and direct runoff to ditches or other drainage features in order to prevent flowing over areas sensitive to erosion and saturation of the roadway.

Gabions

These rock-filled wire basket structures are used for slope stabilization, retaining structures, and stream bank stabilization. Their massive, permeable shapes can provide catchment for debris, dissipation of water velocity, and mass where needed for stability. Gabions are relatively easy to fabricate and install and their materials are readily available. Installed gabions have a degree of flexibility that allows them to tolerate some settlement.

The following measures have been considered for erosion repair at transmission line structures:

Retaining Structures

Earth retaining structures have been considered as a way to provide protection against the encroachment of erosion and slope failure at the high priority structure sites. Crib walls, sheet piling, and gabion structures have been the main types of earth retention structures considered. These types of retaining structures would be used to limit the extent of erosion to an acceptable distance away from the transmission line structures.

Crib walls consist of interlocking members that form a 'log cabin' type of wall anchored into the adjacent embankment. The interlocking members are typically steel or timber, and the wall is backfilled with select material and compacted. Sheet piling refers to steel panels driven into the ground to form a linear earth-retaining structure. Gabions, described in the roadway repair alternatives, could be used in this application to limit the deposition of sliding and unraveling material from cut slopes onto the tower structures; the mass of the gabion structures would prevent movement due to the buildup of material.

Cavity Repair

Another measure to mitigate the erosion damage at the transmission line structure pads is to over-excavate erosion cavities and backfill with compacted select material.

Slope Stabilization and Re-Vegetation

Various areas disturbed during original construction of the transmission line, or disturbed in subsequent activities, have not been able to re-vegetate and as a result have experienced accelerated erosion. A more rigorous approach to re-vegetation could be used at these areas, which would include re-working the top layer of soil, spreading topsoil, and applying a stabilizing emulsion with an approved native seed mix chosen for the area's soil and climatic conditions. Watering would need to be applied to foster early growth.

Map(s)
See attached Maps

Figures(s)
See attached Figures

Work Order Number - 100337708

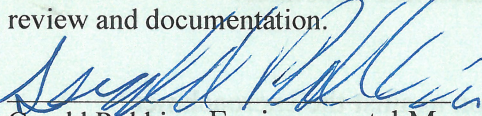
To be completed by Environment Only

Action taken

Note: All Documentation is Attached

- | | |
|--|---|
| <input checked="" type="checkbox"/> Categorical Exclusion (CX) | <input checked="" type="checkbox"/> Integral Elements |
| <input type="checkbox"/> Environmental Assessment (EA) | <input checked="" type="checkbox"/> NEPA Attachment Sheet |
| <input type="checkbox"/> Environmental Impact Statement (EIS) | <input checked="" type="checkbox"/> Environmental Requirements/Mitigation |
| <input type="checkbox"/> Other Determinations: | <input type="checkbox"/> Maps/Figures |

Determination: Based on my review of information provided to me concerning the proposed action as NEPA Compliance Officer, I have determined that the proposed action meets the requirements for the categorical exclusion listed above. Therefore, I have determined that the proposed action may be categorically excluded from further NEPA review and documentation.


Gerald Robbins, Environmental Manager

4/28/16
 Date Approved

bcc:	File Code:	Assigned to: Tish Saare	Project #: 100337708	Environmental Specialist- Date: LaTisha Saare - 4-15-16
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Western Area Power Administration Sierra Nevada Region	CATEGORICAL EXCLUSION (CX) DETERMINATION	Project Number 100337708
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Integral Elements

Project Title: 2016 Access Road Erosion Repair Along the Path 500 kV T-Line

Category of Action:

- B1.13 – Pathways, short access roads, and rail lines

Regulatory Requirements for a Categorical Exclusion Determination: The Department of Energy (DOE), National Environmental Policy Act (NEPA) Implementing Procedures, 10 CFR 1021.410(b) require the following determinations be made in order for a proposed action to be categorically excluded (see full text in regulation).

1. The proposed action fits within a class of action listed in Appendices A and B to Subpart D. For classes of actions listed in Appendix B, the following conditions are integral elements; i.e., to fit within a class, the proposal must not:
 - a. Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, including requirements of DOE and/or Executive Orders;
 - b. Require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities, but may include categorically excluded facilities;
 - c. Disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or un-permitted releases; or
 - d. Have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B;
 - e. Involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.
2. There are no extraordinary circumstances related to the proposal which may affect the significance of the environmental effects of the proposal;
3. The proposal has not been segmented to meet the definition of a categorical exclusion. The proposal is not connected to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions requiring preparation of an environmental impact statement.

Results of Review: In accordance with DOE environmental regulations (10 CFR 1021), The Western Area Power Administration (Western) has reviewed the proposed action in terms of the level of NEPA review needed. Based on this review, Western has determined the proposal is encompassed within a class of action listed in Appendix B to Subpart D (10 CFR 1021.410) which do not require preparation of either an environmental impact statement (EIS) or an environmental assessment (EA).

The proposed action fits within the specified class(es) of action, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.



**Western Area Power Administration,
SIERRA NEVADA REGION
NEPA Attachment Sheet**

Project Number
100337708

PROJECT TITLE:

	2016 Access Road Erosion Repair Along the Path 500 kV T-Line
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EFFECTED ENVIRONMENT

	The project area is within Fresno County. This area has a Mediterranean climate, which is characterized by hot, dry summers and cool, moist winters with annual precipitation ranging between approximately 13 and 22 inches per year. The project area is composed of rolling and steep hills and is dominated by non-native annual/natural grassland and areas of sagebrush and bitterbrush habitat. The project area is interspersed with ephemeral and intermittent drainages. Barren areas within the project areas are comprised of gravel and dirt roads, tower pads, and staging areas for cattle and ranching operations. The primary land uses in the project area consist of cattle grazing/ranching and transmission line location.
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REVIEW ACTION

	The entire Path 15 right-of-way (ROW) was surveyed for biological resources in 2011 by Garcia and Associates (GANDA). Since then, specific biological surveys have been done in 2012 and 2014 for erosion related projects. Sensitive resource surveys will be conducted for specific project locations in spring and summer of 2016 (prior to the start of construction). Conservation measures are detailed below.
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CULTURAL AND HISTORIC RESULTS

<input checked="" type="checkbox"/>	Federal law requires the protection of significant cultural resources and prohibits the removal or purposeful destruction of cultural resource sites and materials. Archaeological and paleontological surveys were conducted prior to the construction of Path 15 for the entire ROW. Though no cultural resource sites are located in the erosion repair areas, there are known sites in or around access roads and possibly outside of the right-of-way. The Path 15 area is sensitive for Paleontological Resources. Should any skeletal remains (human or otherwise) or fossil materials be uncovered during construction activities, all work is to stop at once in the immediate area, and the Contractor shall notify the COR immediately. The Contractor and erosion control crew will be required to attend a cultural and paleontological awareness training conducted by Western prior to mobilization.
<input type="checkbox"/>	Consultation on this project was completed on:
<input type="checkbox"/>	This action is covered by Western's Programmatic Agreement, "Programmatic Agreement Among the Western Area Power Administration, the Advisory Council on Historic Preservation, and the California State Historic Preservation Officer Concerning Emergency and Routine Maintenance Activities and Other Routine Activities at Western Facilities in California," revised March, 2010.
<input checked="" type="checkbox"/>	Mitigation required (see below) Cultural resource sites near construction activities shall be flagged prior to initiation of project to ensure avoidance. Archaeological and tribal monitors may be assigned as necessary.
<input checked="" type="checkbox"/>	Include in Western's annual report

BIOLOGICAL RESULTS

<input checked="" type="checkbox"/>	Studies conducted, in order to evaluate potential impacts of the proposed project on special status species and/or their habitats, included background research to determine which special-status species and their habitats may occur within the project area and a review of habitat types in the project area. This project will be conducted in accordance with the Programmatic Biological Opinion for the Path 15 Operations and Maintenance Activities, Merced and Fresno Counties, California (March 2016; Service File #2013-F-0550). Avoidance, minimization, and mitigation measures detailed in the consultation letter are summarized below.
<input type="checkbox"/>	This activity is covered by Western's Biological Opinion, "Formal Programmatic Consultation on the Operation and Maintenance Activities of the Western Area Power Administration," dated May 27, 1998, U.S. Fish and Wildlife Service File 1.1-97-F-0140.
<input checked="" type="checkbox"/>	Mitigation required (see below)

COMPLIANCE RESULTS

<input checked="" type="checkbox"/>	Recycled Materials Quantities: All materials generated from the project that can be recycled, shall be recycled. Submit quantities of all recycled material by category to the COR within 30 days of recycling and prior to submittal of final invoice. Record quantities of material by category that is salvaged, recycled, reused, or reprocessed.
<input checked="" type="checkbox"/>	Disposal of Waste Material: Dispose or recycle waste material in accordance with applicable Federal, State, and local regulations and ordinances. Coordinate with COR regarding sampling and signatures on manifests for wastes materials if required. Submit quantities of total project waste material disposal as listed below to the COR prior to submittal of final invoice. (1) Unregulated Wastes (i.e., trash): Volume in cubic yards or weight in pounds. (2) Hazardous or Universal Wastes: Weight in pounds. (3) PCB Wastes (If applicable): Weight in pounds. (4) Other regulated wastes (e.g., lead-based paint or asbestos): Weight in pounds (specify type of waste in report).
<input checked="" type="checkbox"/>	Pollutant Spill Prevention, Notification, and Cleanup: The Spill Prevention, Notification, and Cleanup Plan is expected to be a brief description of the measures taken by the contractor to prevent spills, to notify in the event of a spill, to train personnel, and to describe the company's commitment of manpower, equipment, and material which would be mobilized in the event of a spill. The plan should describe those elements in proportion to the risks posed by the project. This not intended to be the Spill Prevention, Control and Countermeasures Plan, as specified in 40 CFR 112. Those plans are required by law for facilities with ≥ 1320 gallons of oil storage.
<input checked="" type="checkbox"/>	Prevention of Air Pollution: Federal law requires the protection of air quality under the Clean Air Act. All activities on this project shall be compliant with Federal, State, and local regulations. In particular, California Air Resources Board regulations apply to diesel equipment and trucks as well as fleets of large spark ignition equipment. Also, the project is located within the San Joaquin Valley Air Pollution Control District jurisdiction and is subject to the local rules from that agency. In particular, rule VIII pertains to PM10 pollution (dust) from construction and excavation activities, paved and unpaved roads.



Prevention of Water Pollution: Federal law requires the protection of water quality under the Clean Air Act. The project is exempt from the General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities issued by the California State Water Board because it consists of routine maintenance activities in an existing right of way, and because the proposed staging areas occurring outside that existing right of way measure collectively less than one acre. Construction activities must therefore remain strictly within the boundaries specified in the plans in order to qualify for this exemption. Best management practices should be used to control runoff from the project areas.

MITIGATION



Other Mitigation: Required

Avoidance and minimization measures are included below.

Western Area Power Administration Sierra Nevada Region	Environmental Requirements for the 2016 Access Road Erosion Repair Along the Path 500 kV T-Line	Project Number 100337708
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ITEMS CHECKED ARE APPLICABLE TO THIS PROJECT.

General

<input checked="" type="checkbox"/>	All routine maintenance activities will be performed during the non-nesting period between August 15 and March 1 as possible. The timing of maintenance activities will be adjusted to avoid sensitive periods for special status species and their habitat types. Qualified biologists will monitor or mark sensitive habitat so that it can be avoided by maintenance personnel during specific activities in specific habitat types. Prior to maintenance activities during the nesting season, a qualified biologist will survey the proposed maintenance sites to determine whether nesting raptors or migratory birds are present. Survey results will be valid only for the nesting season in which they were conducted and additional surveys would be needed for each additional season that work must be conducted.
<input type="checkbox"/>	Routine maintenance activities will be avoided from mid-March through mid-June in the vicinity of structures.
<input type="checkbox"/>	Road maintenance operations will be conducted to minimize soil erosion. The United States Forest Service's Best Management Practices, Forest Practices, and Forest Practices Rules of the California Department of Forestry will be implemented where practical.
<input type="checkbox"/>	Culverts will be sized to match storms that may occur during the life of the road to minimize the potential for access road washouts under high intensity storms.
<input checked="" type="checkbox"/>	Excavated material will not be stock piled or deposited on or near stream banks, lake shorelines, or other water course perimeters where they could be washed away by high water or storm run-off or could significantly impact the water course.
<input type="checkbox"/>	Vegetative management plans will be followed as appropriate.
<input checked="" type="checkbox"/>	In areas where excavation is not required, vegetation will be left in place whenever possible and original contours maintained in an undisturbed condition.
<input checked="" type="checkbox"/>	Habitat diversity will be maintained to the greatest extent feasible.
<input type="checkbox"/>	Brush blades will be used on bulldozers in clearing operations where such use will help preserve the cover crop of grass, low-growing brush, etc.
<input type="checkbox"/>	Dispose of all cleared vegetation in an appropriate manner.
<input checked="" type="checkbox"/>	The biologist will determine whether a sensitive habitat is present at the maintenance site. If special status species are identified in the area, maintenance will receive approval from Environment prior to initiating any maintenance.
<input checked="" type="checkbox"/>	Environment will be contacted immediately: a. If there is a "take" of a special status species or action affecting their critical habitat, and/or b. If archeological, paleontological, or historic evidence is found.
<input checked="" type="checkbox"/>	No paint or permanent discoloring agents will be applied to rocks or vegetation.
<input checked="" type="checkbox"/>	If used, survey stakes will be removed as a part of the final clean up.
<input type="checkbox"/>	All work on access and maintenance roads must stay within the existing prism of the roads.
<input checked="" type="checkbox"/>	All construction pipe, culverts, or similar structures that are stored at the construction site for one or more overnight periods will be thoroughly inspected before the pipe is subsequently moved, buried, or capped. If during inspection listed species are detected inside a pipe, that section of pipe shall not be moved until the species has escaped on its own or the USFWS will be contacted for further instruction.
<input checked="" type="checkbox"/>	Project personnel will exercise caution when commuting to the construction area to minimize any chance for the inadvertent injury or mortality of species encountered on major roads leading to and from the construction area. Project related vehicles and equipment will not exceed 15 miles per hour in route to the action area on access and maintenance roads that do not have a posted speed limit and 10 miles per hour

	on ungraded access routes. Project related vehicles and equipment will be restricted to established access and maintenance roads; off-road travel will not be permitted.
<input checked="" type="checkbox"/>	Project personnel will thoroughly inspect underneath vehicles and equipment for the presence of listed species prior to movement. No vehicles or equipment will be moved until the animal has left voluntarily.
<input checked="" type="checkbox"/>	All food-related trash items will be disposed of in securely closed containers and removed from the project site daily.
<input checked="" type="checkbox"/>	Any excavated, steep walled holes will be covered at the close of each working day by plywood or similar materials and will be checked daily, or will be filled with one or more escape ramps constructed of earthen fill or wooden planks. Windows may be installed in covers too heavy to move easily.
<input checked="" type="checkbox"/>	All areas subject to temporary ground disturbance, including storage areas, staging areas and temporary roads, will be re-contoured and re-vegetated with a native seed mix to promote restoration of the area to pre-project conditions.
<input checked="" type="checkbox"/>	Plastic monofilament netting is prohibited due to potential entrapment of listed species. Tightly woven (less than 0.25 inch diameter) biodegradable fiber netting or biodegradable coconut coir matting shall be used instead.
<input checked="" type="checkbox"/>	No night work will be conducted.

Threatened and Endangered Species

<input checked="" type="checkbox"/>	Federal law prohibits the taking of endangered, threatened, proposed or candidate wildlife and plants, and destruction or adverse modification of designated Critical Habitat. Federal law also prohibits the taking of birds protected by the Migratory Bird Treaty Act, and the Bald and Golden Eagle Protection Act. "Take" means to pursue, hunt, shoot, wound, kill, trap, capture or collect a protected animal or any part thereof, or attempt to do any of those things. The Contractor must always stay within Western's right-of-way and/or easement.
<input checked="" type="checkbox"/>	Known Occurrence of Protected Species or Habitat: Following issuance of the notice to proceed, and prior to the start of construction, Western will provide training to all contractor and subcontractor personnel involved in the construction activity. Untrained personnel shall not be allowed in the construction area. Western will provide two sets of drawings showing known sensitive areas located on or immediately adjacent to the transmission line right-of-way and/or facility. These areas shall be considered avoidance areas. Prior to any construction activity, the avoidance areas shall be marked on the ground. If access is absolutely necessary, the contractor shall first obtain permission from the Contracting Officers Representative (COR) and Environment, noting that a Western and/or other government or tribal agency biologist may be required to accompany personnel and equipment. Ground markings shall be maintained through the duration of the contract. Western will remove the markings during or following final inspection of the project.
<input checked="" type="checkbox"/>	Unknown Occurrence of Protected Species or Habitat: If evidence of a protected species is found in the project area, the contractor shall immediately notify the COR and provide the location and nature of the findings. The contractor shall stop all activity in the vicinity of the protected species or habitat and not proceed until directed to do so by the COR.
<input checked="" type="checkbox"/>	Prior to the start of project activities, all personnel will participate in environmental awareness training which will inform them of the sensitive habitats within the project area, the species that have the potential to occur in the project area, and the avoidance and minimization measures that are to be adhered to during project activities. Any new crew members that start after project activities have started will be given the environmental awareness training prior to starting work on site.
<input checked="" type="checkbox"/>	General Mitigation/Avoidance Measures: The Contractor shall follow all species specific conservation measures listed below as applicable to each site, in coordination with Western's Environmental Point of Contact (POC) and the COR.

Perennial Streams and Rivers

<input checked="" type="checkbox"/>	The following activities will be prohibited at all times within 200 feet of a seep, spring, pond, lake, river, stream, or marsh, and their associated habitats:
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	<ul style="list-style-type: none"> • Vehicle access, except on existing access and maintenance roads, unless approved by Natural Resources • Dumping, stockpiling, or burying of any material, except as required for specific O&M activities (e.g., rip-rap) • Mixing of pesticides, herbicides, or other potentially toxic chemicals • Open petroleum products <p>Equipment will be stored, fueled, and maintained in a vehicle staging area 200 feet or the maximum distance possible from any seep, spring, pond, lake, river, stream, marsh, or their associated habitats. Vehicles will be inspected daily for fluid leaks before leaving the staging area.</p>
☒	All spills of fuel or hydraulic fluid would be immediately cleaned up according to Western's guidelines for hazardous material handling.

Migratory Birds and Raptors

☒	<p>Under the Migratory Bird Treaty Act of 1918, migratory bird species and their nests and eggs are protected from injury or death. Impacts to migratory bird nests (including state listed Swainson's hawk, other raptors, and state listed bank swallow) shall be avoided during the nesting season (March 1 to August 31). If project activities occur during the nesting season, Western will survey the project area for migratory bird nests prior to project activities and establish appropriate buffers around any active nests that may potentially be disturbed. If work must be conducted within these buffers, a Western supplied biological monitor will be on site for project activities within the buffers. If the biological monitor determines that activities are likely to cause nest impacts or nest abandonment, then project activities in the area shall be postponed or adjusted until nestlings have fledged, the nest is no longer active, or the activities are not likely to cause nest impacts or nest abandonment.</p>
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California Tiger Salamander and California Red Legged Frog

☒	Ground disturbance will not occur within California tiger salamander (CTS) and California red-legged frog (CRLF) aquatic/breeding habitat.
☒	<p>A pre-activity survey will be conducted by a Service-approved biologist no more than 24 hours before activities begin in potential CTS and CRLF upland habitat. If ground disturbance is required, a Service-approved biologist will identify CTS and CRLF upland habitat within disturbance areas. If a burrow or other potential upland habitat feature must be impacted, then a Service-approved biologist will supervise the excavation of the burrow or habitat feature. If CTS and CRLF is detected, all work in the immediate vicinity will cease, and the salamander or frog will be relocated to the entrance of a burrow greater than 200 feet from the boundary of the project ground disturbance area. A Service-approved biologist will remain on site during all activities to ensure protection of CTS and CRLF or an exclusion barrier will be constructed around the project action area. Exclusion materials will be removed at the end of the work activity.</p>

Blunt-Nosed Leopard Lizard

☒	A Service-approved biologist will conduct blunt-nosed leopard lizard (BNLL) surveys for each ground disturbance site in BNLL habitat per the Disturbances for Maintenance Activities section of the 2004 <i>Approved Survey Methodology for the Blunt-nosed Leopard Lizard</i> (CDFG 2004).
☒	If BNLL are detected during surveys, a flashing barrier will be installed when possible around the work area to prevent BNLL from entering the work area and to allow the removal of any BNLL inhabiting the work area. The barrier or fencing will be at least 36 inches tall, buried at least 6 inches in depth, and reinforced with rebar or T-posts. Burrow passage to the surface will be maintained during fence installation. Silt fencing material, wooden or soil ramps, or one-way exits may be installed on the inside

	of the fencing to allow BNLL to exit the site. Fencing will be removed upon project completion. If BNLL is subsequently found within the fenced work area, the fence may be removed in that area so that the lizard may leave the exclusion zone. A Service-approved biologist will monitor the location of the BNLL 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.
☒	If BNLL are detected during surveys, any active burrow within a 30-foot radius of the proposed project site will be flagged and marked with a burrow number prior to construction activities. Flagged exclusion zones with a 30-foot radius will be established around any active burrow as possible. Construction activities, with the exception of essential vehicle operation on existing roads and foot travel, would be prohibited within this exclusion zone. If the construction area encroaches on an avoidance area, burrows shall not be excavated unless the Service-approved biologist determines excavation is absolutely necessary. If a burrow cannot be avoided, the following procedures shall be implemented. The burrow will be hand excavated under the supervision of a Service-approved biologist in a manner that avoids BNLL mortality. Burrow excavation is not necessary prior to construction activities if no BNLL were detected during protocol level surveys or a flashing barrier has been installed. If burrow excavation is to occur, excavation will occur no more than 7 days prior to construction. If a BNLL is found in the burrow it will be allowed to escape.
☒	A Service-approved biologist will be on-site for any activities within suitable BNLL habitat. Prior to construction activities each day within suitable BNLL habitat, the Service-approved biologist will conduct a brief ground survey of the site to verify that no BNLL are visible within the site. The Service-approved biologist will complete daily reports/logs summarizing activities and environmental compliance.

Giant Kangaroo Rat

☒	Prior to project activities, a Service-approved biologist will conduct an assessment of use by giant kangaroo rat at each site. If the Service-approved biologist determines that the site is being used by a kangaroo rat species, but is unable to determine the species, then trapping activities to determine kangaroo rat species will be conducted by a Service-approved biologist.
☒	If kangaroo rat trapping activities result in confirmation of giant kangaroo rat presence, the following measures will be implemented: Prior to construction activities, any active giant kangaroo rat precincts in the vicinity of the project sites will be flagged and marked with a precinct number. Exclusion zones with a 30-foot radius will be established around any burrow precinct. Construction activities, with the exception of essential vehicle operation on existing roads and foot travel will be prohibited within the exclusion zone. If project activities must occur within the precinct exclusion zone, a flashing barrier may be installed when possible around the work area to prevent giant kangaroo rats from entering the work area and allow the removal of any giant kangaroo rats inhabiting the work area. The barrier or fencing will be at least 36 inches tall, buried at least 6 inches in depth, and reinforced with rebar or T-posts. The disturbance site and a 30-foot radius (activity area) around the site will be trapped for four consecutive nights. Trapping and relocation will follow the methodology described in Tennant et al. (2013). The methodology includes relocating giant kangaroo rat to nearby unoccupied habitat with natural or artificial burrows present. A monitoring plan will be developed in coordination with the Service for the recipient site.
☒	A Service-approved biologist will be on-site for any activities within suitable giant kangaroo rat habitat. Prior to construction activities each day within suitable giant kangaroo rat habitat, the Service-approved biologist will conduct a ground survey of the site to verify that giant kangaroo rats or their precincts are not visible within the site.

San Joaquin Kit Fox

☒	No less than 14 days and no more than 30 days prior to project activities that involve ground disturbance or off road travel in suitable San Joaquin kit fox (SJKF) habitat, a Service-approved biologist will conduct
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	San Joaquin kit fox surveys within the project area and in a 200-foot buffer surrounding the project area. These surveys will serve to determine the presence of any natal, potential or atypical SJKF dens, as those dens are defined in the <i>Standardized Recommendations for the Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance</i> (Service 2011, or as updated; standard recommendations). Any natal, potential or atypical den, as defined in the standardized recommendations, will be monitored for evidence of San Joaquin kit fox use by placing a wildlife monitoring camera or tracking media at the entrance for at least three consecutive nights. Active dens will be marked with a 100-foot no disturbance buffer and natal or pupping dens will be marked with a 200-foot buffer.
<input checked="" type="checkbox"/>	If an active non-natal den is observed in a proposed project disturbance area, and cannot be avoided, Western will implement den destruction in accordance with the “Destruction of Dens” methodology outlined in the standardized recommendations. Natal or pupping dens which are occupied will not be destroyed until the pups and adults have vacated and then only after consultation with the Service.
<input checked="" type="checkbox"/>	A Service-approved biologist will be on-site for any activities within suitable San Joaquin kit fox habitat. Prior to construction activities each day within suitable San Joaquin kit fox habitat, the Service-approved biologist will conduct a brief ground survey of the site to verify that no San Joaquin kit fox are visible within the site. The biologist will have the authority to stop and/or redirect project activities in coordination with Western Environment ensure the protection of San Joaquin kit fox. The biologist will complete daily reports to record the surveys and retain them for Service review.

California Jewelflower and San Joaquin Woolly-threads

<input checked="" type="checkbox"/>	A Service-approved botanist will conduct annual botanical surveys in suitable California jewelflower or San Joaquin woolly-threads habitat at proposed activity areas that will experience soil disturbance or vegetation removal. California jewelflower and San Joaquin woolly-threads reference populations will be checked to assure appropriate survey period. If either species is observed, the population will be avoided by 50 feet or greater and a biological monitor will be present for any activities within the vicinity of the population to ensure that the buffer is not encroached on. Only manual/hand vegetation removal will occur within the buffer under the supervision of a Service-approved biologist who will ensure that listed plants are not removed.
<input checked="" type="checkbox"/>	If ground disturbing activities will occur outside the California jewelflower and San Joaquin woolly-threads growth period (November to April), topsoil will be stockpiled from activity areas prior to project activities. Topsoil from the activity area will be broadcasted over the disturbance area following activity completion.

Burrowing Owl

<input checked="" type="checkbox"/>	From February 1 to August 31 project activities will be prohibited within 250 feet of burrowing owl nesting dens. From September 1 through January 31, disturbance will be prohibited within 160 feet of burrowing owl dens. If activities must encroach on these buffers, a biological monitor will be present to assess disturbance of the owls and activities will be brief and not on consecutive days. Active dens will not be directly impacted by project activities.
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Compliance Regulatory Requirements

<input checked="" type="checkbox"/>	No violations of applicable statutory, regulatory, or permit requirements for environment, safety, and health, including requirements of DOE and/or Executive Orders will be permitted.
<input checked="" type="checkbox"/>	There will be no uncontrolled or un-permitted releases of hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products to avoid Adversely affecting environmentally sensitive resources.
<input checked="" type="checkbox"/>	In the event of a Hazardous Material/Waste spill Natural Resources will be contacted, dispatch notified, and the appropriate Federal, State, and local regulating authority notified depending on the type and size of

	the spill (For further guidance, please see Natural Resources).
<input checked="" type="checkbox"/>	Hazardous Materials/Waste on-site to consider: Fueling of equipment; In the right of way, place spill drip pans (or similar) below fueling areas, spill kit and tools available nearby to stop the flow of fuel spills, and employees trained in spill response.
<input checked="" type="checkbox"/>	Hazardous Materials/Waste need to be removed off site for disposal/recycling
<input type="checkbox"/>	Piping and oil sampling required
<input type="checkbox"/>	Material Analytical Data: See attached results for reference
<input checked="" type="checkbox"/>	Erosion control measures to be taken to prevent sediment from reaching river
<input type="checkbox"/>	Soil Sampling