Environmental Questionnaire Supplemental Document

II. QUESTIONNAIRE

A. PROJECT SUMMARY

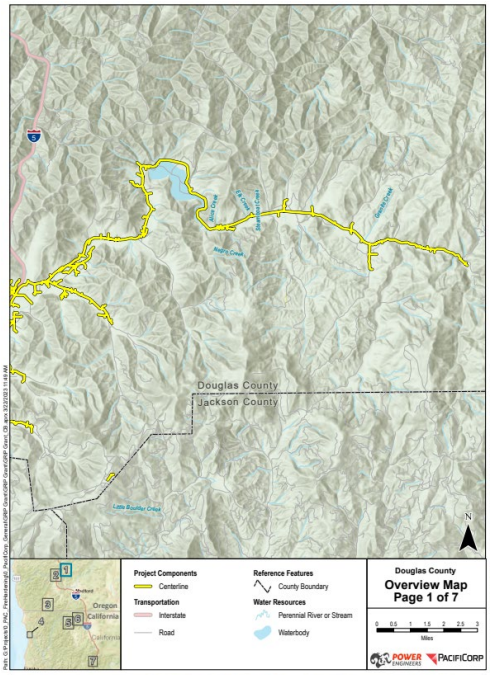
6. Location of Activities covered by **this** Environmental Questionnaire: (City/Township, County, State):
This project will take place in:
- Klamath, Del Norte County, CA
- Cave Junction, Josephine County, OR
- Castella, Shasta County, CA
- Lakehead, Shasta County, CA
- Scott Bar, Siskiyou County, CA
- Glendale, Josephine and Douglas County, OR

C. PROJECT LOCATION

1. **Provide a brief description of the project location (physical location, surrounding area, adjacent structures).**

The proposed project is located in Del Norte, Siskiyou and Shasta Counties in California and Josephine and Douglas Counties in Oregon covering a total of 337 miles of existing overhead distribution line. The project passes through residential, agricultural, and forested areas and is within an existing, established utility right-of-way (ROW).

2. **Attach a project site location map of the project work area.**
Site maps for the circuits that will be worked on are attached below. Not all portions of the illustrated circuits are scoped as part of this project as portions of these are undergrounded or otherwise not part of this project's scope. More detailed plans can be shared during award negotiation.


Douglas County
Jackson County
Project Components
Centerline
Transportation
Interstate
Road
Reference Features
County Boundary
Water Resources
Perennial River or Stream
Waterbody
Douglas County
Overview Map
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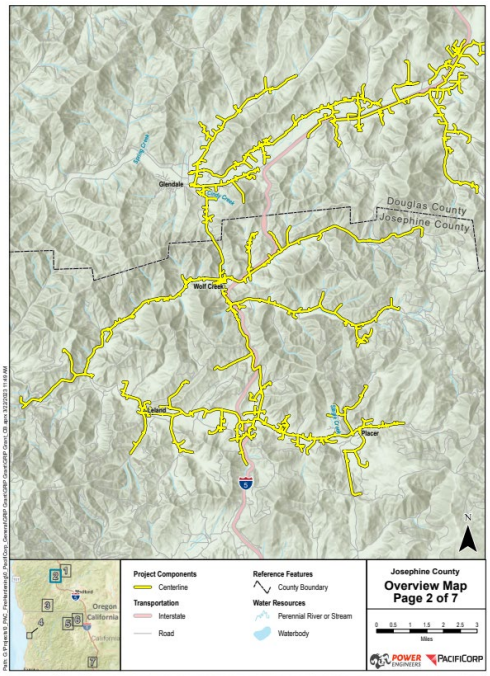
POWER ENGINEERS
PACIFICORP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Azalea
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Project Components
Centerline
Transportation
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Water Resources
Perennial River or Stream
Waterbody
Josephine County
Overview Map
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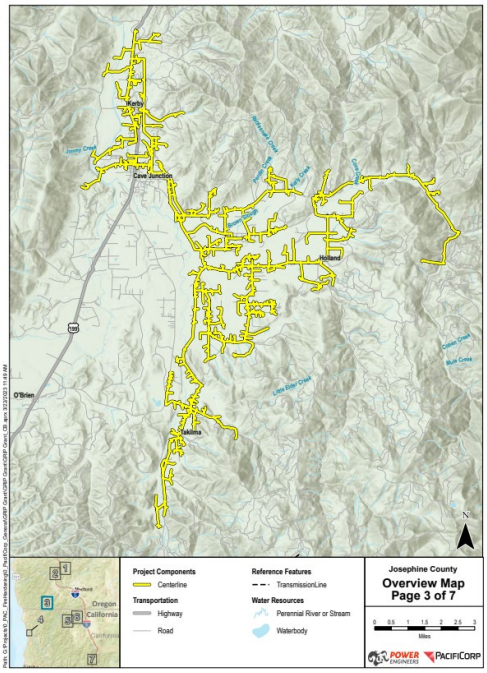
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Cave Junction
Holland
O'Brien
Takilma
Project Components
Centerline
Transportation
Highway
Road
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TransmissionLine
Water Resources
Perennial River or Stream
Waterbody
Josephine County
Overview Map
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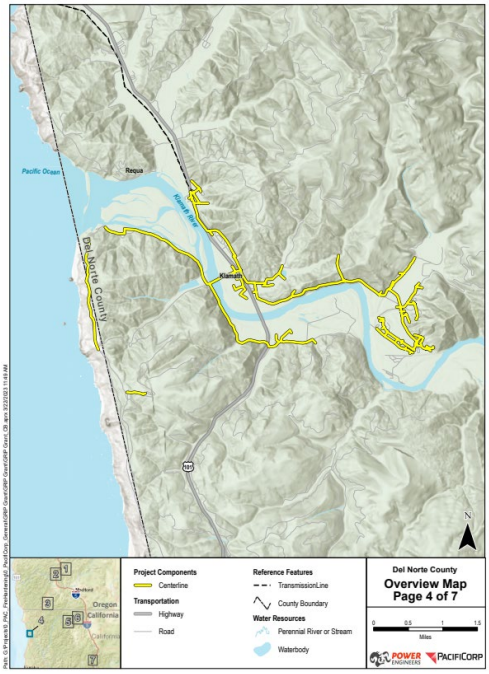
Pacific Ocean
Requa
Klamath River
Del Norte County
Klamath
Project Components
Centerline
Transportation
Highway
Road
Reference Features
TransmissionLine
County Boundary
Water Resources
Perennial River or Stream
Waterbody
Del Norte County
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POWER ENGINEERS
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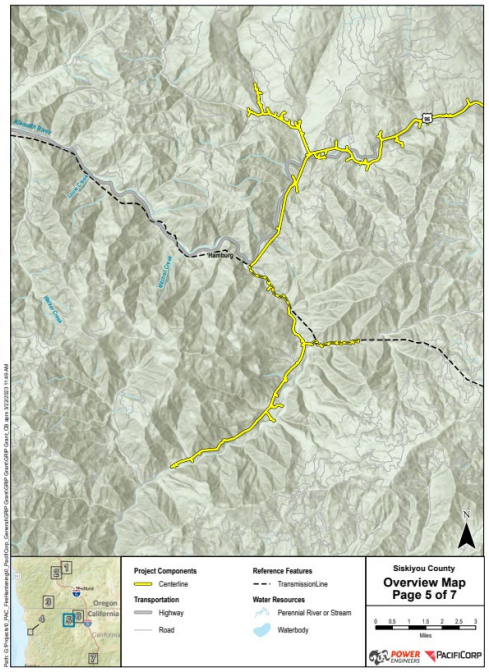

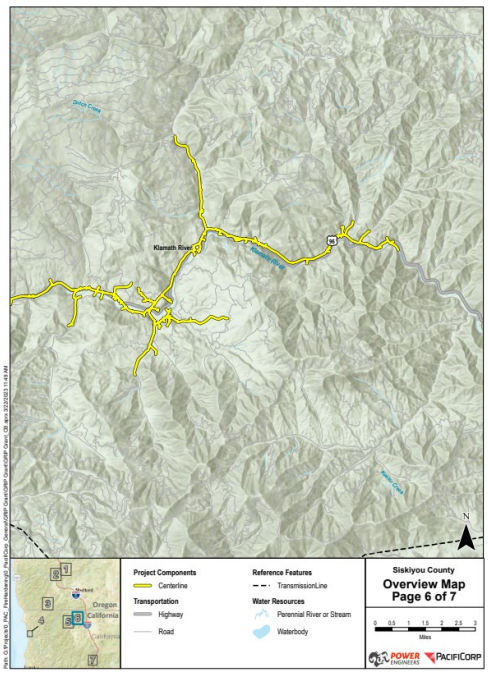

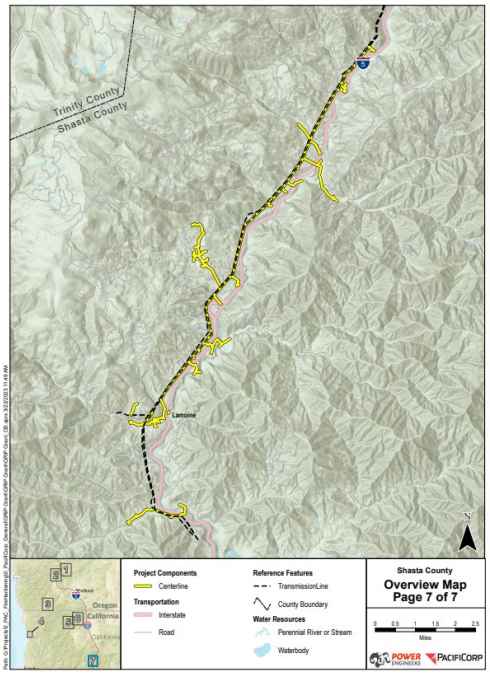

D. ENVIRONMENTAL IMPACTS

1. Land Use

b. **Identify the total size of the facility, structure, or system and what portion would be used for the proposed project.**

PacifiCorp plans to replace approximately 337 miles of existing overhead distribution line located between Redding, California and Canyonville, Oregon. The Project includes replacement (i.e., reconductoring) of entire line segment with covered conductors (i.e., wires), replacement of utility poles, and updating system

protection and other equipment as needed. These activities are the outcome of PacifiCorp's continued fire mitigation program of system hardening in California and Oregon. Work in California is being conducted in accordance with California Senate Bill 901 and the new provisions of California Public Utilities Code Section 8386.

c. **Describe planned construction, installation, and/or demolition activities, i.e., roads, utilities system right-of-ways, parking lots, buildings, laboratories, storage tanks, fueling facilities, underground wells, pipelines, or other structures.**
□ **No construction would be anticipated for this project**.

The reconductoring process includes first temporarily relocating the existing conductor such that it can remain energized while the new conductor is installed. Next, rigging is installed at each pole to allow for the new conductor to be pulled into place. Once strung, the conductor will be transferred to its permanent location on all poles and the old conductor will be removed. After the new distribution line is energized, the former distribution line will be de-energized. A tractor and trailer with reels will be used to pull the ground wire and de-energized lines. For utility poles to be replaced, the existing pole will be cut and removed. Pole installation includes excavation of a new hole using a power auger or similar equipment. Anchors that may be needed to support the utility poles will be screwed or hammered into the ground.

d. **Describe how land use would be affected by operational activities associated with the proposed project.**
□ **No land areas would be affected**

Land use will not change as a result of the proposed project. The proposed project will occur in existing utility right-of-way (ROW) and involves the replacement of existing distribution facilities with no increase in footprint or level of service.

g. **Would the proposed project be located in or near local, state, or federal parks; forests; monuments; scenic waterways; wilderness; recreation facilities; or tribal lands?**

The proposed project crosses or is within one mile of the following state, federal, and tribal lands:

LOCAL, STATE OR FEDERAL PARKS	FORESTS	MONUMENTS	SCENIC WATERWAYS	WILDERNESS	RECREATION FACILITIES	TRIBAL LANDS
• Castle Crags State Park • Wolf Creek Park • Golden State Heritage Site • Prairie Creek Redwood State Park • Del Norte Coast Redwoods State Park	• Shasta-Trinity National Forest • Umpqua National Forest • Rogue River-Siskiyou National Forest • Six Rivers National Forest • Klamath National Forest	• California Coastal National Monument	• Wild/Scenic Rogue River • Cow Creek Wild/Scenic River • Quines Creek Wild/Scenic River • Illinois, Oregon Wild/Scenic River • Smith River, California Wild/Scenic River • Klamath, California Wild and Scenic River	• Murrelet State Wilderness • Castle Crags Wilderness Area	• Stage Coach Forest State Scenic Corridor – State Recreation Area • Whiskeytown Shasta-Trinity National Recreation Area – USFS • Smith River National Recreation Area – USFS	• Yurok • Bureau of Indian Affairs

2. Construction Activities and/or Operation

a. Identify project structure(s), power line(s), pipeline(s), utilities system(s), right-of-way(s) or road(s) that will be constructed and clearly mark them on a project site map or topographic map as appropriate.

The project involves replacing existing power lines. Utility poles may be replaced or added where necessary to support the higher weight conductor. Refer to site maps on pages 2-3.

c. Would the proposed project affect any existing body of water?

No anticipated impacts. The project would span bodies of water (e.g., lakes, rivers, streams) that are crossed by the existing distribution line. Best management practices (BMPs) and avoidance measures will be utilized to avoid impacts to existing bodies of water.

d. Would the proposed project impact a floodplain or wetland?

Portions of the existing distribution line are within floodplain and wetland areas. No significant impacts to floodplain and wetland areas are expected. The project would avoid floodplains and wetlands to the extent possible. Floodplain and wetland permits will be obtained from local, state, and/or federal agencies and BMPs will be utilized to mitigate impacts.

e. Would the proposed project potentially cause runoff/sedimentation/erosion?

The proposed project may result in minor runoff, sedimentation, or erosion, however BMPs will be used to control stormwater and reduce erosion and sedimentation. In addition, the project will comply with all applicable laws and regulations related to stormwater management, erosion control, and sedimentation prevention.

3. Biological Resources

a. Identify any State or Federally listed endangered or threatened plant or animal species potentially affected by the proposed project.

There are 29 federally or state listed endangered or threated species including 19 federally listed species, 13 species listed by the state of Oregon, and 15 species listed by the state of California (see table below) that have habitats that cross proposed project areas or occur within one mile of the project area. This includes 11 plants, two insects, three crustaceans, four fish, two amphibians, four birds, and three mammals. Some of the species are listed by both state and federal agencies. These results are based on data obtained from the United States Fish and Wildlife Service Information for Planning and Consultation (IPaC) tool, the Oregon Biodiversity Information Center (ORBIC), and the California Natural Diversity Database (CNDDB). Because the proposed project will occur within an existing disturbed utility ROW and all appropriate mitigation and avoidance measures will be implemented during construction, no significant impacts to any endangered or threatened species are expected.

State and Federally Listed Endangered or Threatened Species with Potential Habitat within 1-mile of the Project Area

Species	Status	Habitat
Plants		
Cook's lomatium (*Lomatium cookii*)	Federal Endangered, Oregon Endangered	On clay loam soils in ephemeral wet meadows and along edges of vernal pools.
Gentner's fritillary (*Fritillaria gentneri*)	Federal Endangered, Oregon Endangered	Edges of open woodlands or chaparral/grassland habitat. Oregon white oak (*Quercus garryana*) and Pacific madrone (*Arbutus menziesii*). Does not occur in overly dry or overly wet sites.
Howell's mariposa-lily (*Calochortus howellii*)	Oregon Threatened	Dry, rocky, serpentine soils.
Indian Valley brodiaea (*Brodiaea rosea*)	California Endangered	Serpentine clay and gravel in open areas along drainages in chaparral and coniferous forests.
Kincaid's lupine (*Lupinus sulphureus* ssp. *kincaidii*)	Federal Threatened, Oregon Threatened	Upland prairie remnants with no agricultural disturbance and well-drained soils.
Large-flowered rush-lily (*Hastingsia bracteosa* var. *bracteosa*)	Oregon Threatened	Serpentine wetlands including seeps, *Darlingtonia* bogs, hillside marshes, fens, or small streams from 1150-2300 feet elevation.

Species	Status	Habitat
McDonald's rock-cress *(Arabis macdonaldiana*)	Federal Endangered, California Endangered	Rock crevices and steep, bare slopes with serpentine soils high in magnesium, silica, iron, and nickel.
Purple flowered rush-lily (*Hastingsia bracteosa* var. *atropurpurea*)	Oregon Threatened	Serpentine wetlands including seeps, *Darlingtonia* bogs, hillside marshes, fens, or small streams from 1150-2300 feet elevation.
Sexton Mountain mariposa-lily (*Calochortus indecorus*)	Oregon Endangered	Damp, serpentine mountain slopes on Sexton Mountain. Presumed extinct.
Wayside aster (*Eucephalus vialis*)	Oregon Threatened	Understory of mixed forests, open deciduous woodlands, grassy balds, exposed serpentine slopes, and roadsides. Prefers open or recently burned areas but can persist under dense canopy cover.
Yreka phlox (*Phlox hirsuta*)	Federal Endangered, California Endangered	Dry, serpentine talus and open Jeffery Pine stands surrounding Yreka, California from 3,250 to 5,000 feet in elevation
Insects		
Franklin's bumblebee (*Bombus franklini*)	Federal Endangered	Between the Coast and Sierra Cascade Ranges from 540-7,800 feet elevation. Habitat should include plentiful food sources (*Lupinus, Eschscholzia, Agastache, Monardella, Vicia*), abandoned rodent burrows in which to nest, and probably proximity to water for prolongation of flowering season of plant food sources.
Monarch butterfly (*Danaus plexippus*)	Federal Candidate	Open field and meadows. Dependent on available nectar-producing flowers during migration and milkweed species for breeding.
Crustaceans		
Conservancy fairy shrimp (*Branchinecta conservatio*)	Federal Endangered	Large, cool-water vernal pools with moderately turbid water. Pools fill with water during fall and winter rains and dry during the spring and summer.
Vernal pool fairy shrimp (*Branchinecta lynchi*)	Federal Threatened	Variety of different vernal pool habitats, from small, clear, sandstone rock pools to large, turbid, alkaline, grassland valley floor pools. Pools fill with water during fall and winter rains and dry during the spring and summer.
Vernal pool tadpole shrimp (*Lepidurus packardi*)	Federal Endangered	Wide variety of ephemeral wetland habitats including vernal pools and wetlands of various size. Sizes of occupied pools have ranged from >1 acre to 88 acres.
Fish		
Eulachon (*Thaleichthys pacificus*)	Federal Threatened	Anadromous species spending most of its life in the Pacific Ocean before returning to cold inland rivers fed by snow-melt to spawn.
Longfin smelt (*Spirinchus thaleichthys*)	California Threatened	Occurs in aquatic habitats and estuaries.
Lost River sucker (*Deltistes luxatus*)	Federal Endangered, California Endangered, Oregon Endangered	Occurs in aquatic habitats, Klamath/north coast flowing waters, and Klamath/north coast standing waters.
Shortnose Sucker (*Chasmistes brevirostris*)	Federal Endangered, California Endangered, Oregon Endangered	Occurs in aquatic habitats, Klamath/north coast flowing waters.
Amphibians		
Foothill yellow-legged frog (*Rana boylii*)	California Endangered	Streams with coarse substrate gravel bars, potholes in bedrock substrates, and slow-flowing backwaters.
Scott Bar salamander (*Plethodon asupak*)	California Threatened	Moss-covered talus slopes under old-growth conifer forests in the Klamath Mountain Range
Birds		
Bald eagle (*Haliaeetus leucocephalus)*	California Endangered	Nests in large, open trees, especially ponderosa pines, generally within one mile of rivers or open water for foraging.

Species	Status	Habitat
Marbled murrelet (*Brachyramphus marmoratus*)	Federal Threatened, California Endangered, Oregon Endangered	Nests in lower montane coniferous forest, old growth, and redwood forest.
Northern spotted owl (*Strix occidentalis caurina*)	Federal Threatened, Oregon Threatened, California Threatened	Dense stands of mature conifer forest and woodlands.
Yellow-billed cuckoo (*Coccyzus americanus*)	Federal Threatened, California Endangered	Occurs in riparian forest with dense stands of cottonwood and willow.
Mammals		
California wolverine (Gulo gulo)	Federal Proposed Threatened, California Threatened, Oregon Threatened	Occurs in high elevation caves, logs, or burrows with available nearby water in alpine, alpine dwarf scrub, meadows and seeps, montane dwarf scrub, north coast coniferous forest, subalpine coniferous forest, upper montane coniferous forest, and wetlands. Hunts in open areas.
Gray wolf (*Canis lupus*)	Federal Endangered, California Endangered	Wide-ranging, adaptable species found in temperate forests, mountains, tundra, taiga, and grasslands.
Pacific marten (*Martes caurina*) coastal distinct population segment	Federal Threatened, California Endangered	Mature and deciduous coniferous forests.

b. Would any designated critical habitat be affected by the proposed project?

The project overlaps with approximately 5.5 miles of federally-designated critical habitat for Cook's lomatium, 9.8 miles of northern spotted owl critical habitat, and 1 mile of proposed critical habitat for the coastal distinct population segment of Pacific marten. Because work will be done within the existing disturbed ROW and all appropriate mitigations measures will be implemented during construction, no impacts to critical habitat are anticipated. BMPs will be utilized to minimize any potential impacts to adjacent habitats outside the ROW. Seasonal avoidance and/or buffers may be used when working in areas designated as critical habitat to mitigate any negative impacts from construction-related activities including noise, vibration, and other disturbances. The project would work closely with regulatory agencies to ensure that all environmental regulations including the Endangered Species Act are followed and that appropriate mitigation measures are implemented to protect these important habitats within or adjacent to the ROW. Therefore, no impacts are anticipated to critical habitat for the three species identified above.

c. Describe any impacts that construction would have on any other types of sensitive or unique habitats.

Construction will overlap with previously-disturbed sensitive and unique habitats within the ROW, but we do not expect project activity to have new impacts on these habitats because the project occurs in an existing ROW and careful planning and mitigation strategies would be implemented to help minimize impacts. Where the project crosses habitat or occurrences for protected sensitive species, species-specific surveys would be performed prior to construction to avoid impacting sensitive or unique habitats. The project would avoid wetlands, waterways, and other sensitive or unique habitats to the extent possible. BMPs will be utilized to minimize any potential impacts to adjacent habitats outside the ROW. Construction waste will be dealt with responsibly, and all vegetation and soil management will comply with federal, state, and local regulations and in coordination with relevant agencies.

d. Would any foreign substances/materials be introduced into ground or surface waters, soil, or other earth/geologic resource because of project activities? How would these foreign substances/materials affect the water, soil, biota, and geologic resources?

The project involves replacing existing power lines within existing ROW. Utility poles may be replaced or added where necessary to support the higher weight conductor. Construction activities will replace existing wooden utility poles with new wooden, fiberglass, or steel poles. A Stormwater Pollution Prevention Plan would be prepared and implemented to control erosion and sedimentation and keep construction materials from migrating offsite or into the ground or waters. BMPs would be used to help prevent additional foreign substances from entering the ground or surface waters, soil, biota, or other resources. Hazardous materials

would be properly handled and stored. Vehicles and other equipment would be inspected regularly and kept in good repair to ensure that oils, lubricants, solvents, fuels, or other chemicals are not leaked or spilled. Leaks or spills would promptly be contained and cleaned up in accordance with a spill prevention and response plan. Fueling and maintenance would occur outside of the project area on impervious surfaces. Because of the implementation of BMPs to reduce or eliminate spills or leaks, the replacement utility poles are not anticipated to affect ground or surface water, soil, biota, or other resources.

e. Would any migratory animal corridors be impacted or disrupted by the proposed project?

To minimize the potential of the project to impact migratory species and their corridors, the project would carefully evaluate migratory species and implement mitigation measures such as construction schedules that avoid peak migration periods or temporary fencing. The project will comply with all applicable laws and regulations related to migratory species and migratory animal corridor protection, including the Migratory Bird Treaty Act and the Endangered Species Act.

4. Socioeconomic and Infrastructure Conditions

c. Would the proposed project require new transportation access (roads, rail, etc.)? Describe location, impacts, costs.

The proposed project is expected to use existing access to the utility ROW that has been established for regular maintenance of the distribution line. If new access is needed, impacts would be evaluated, and appropriate agencies would be consulted to avoid impacts to sensitive species and their habitats.

5. Historical/Cultural Resources

a. Describe any historical, archaeological, or cultural sites in the vicinity of the proposed project; note any sites included on the National Register of Historic Places.

Based on cultural resource database records, the proposed project occurs within ¼ mile of 280 known cultural resources. Of those resources, 209 are considered potentially Eligible (unevaluated) for listing on the National Register and 62 are considered Ineligible. Seven known cultural resources are determined Eligible. Two of the resources are currently included on the National Register.

b. Would construction or operational activities planned under the proposed project disturb any historical, archaeological, or cultural sites?

Construction associated with the proposed project will occur within or near the known cultural sites described above. The potential for the proposed project to disturb the cultural sites will be evaluated once the project has been designed. Cultural monitoring and various avoidance measures will be implemented to avoid and/or mitigate the potential for significant impacts to cultural sites.

d. Would the proposed project interfere with visual resources (e.g., eliminate scenic views) or alter the present landscape?

No, the proposed project would not interfere with visual resources or alter the present landscape. The project consists of maintenance upgrades on an existing distribution line. Existing utility poles that are replaced will be located within the existing utility corridor. Replacement and new poles will generally be 5 to 10 feet taller in height than the existing structures. The replacement and new poles will appear like the existing poles and be dark brown in color with a non-reflective finish. The replacement conductors will consist of a different configuration that is more clustered and therefore, may be more apparent from some viewing locations.

However, due to the thin form of the wire, the replacement configuration represents an incremental change to the degree of landscape modification from the current distribution line. As such, it is expected that the project would cause minimal change to the current viewing conditions.

6. Atmospheric Conditions/Air Quality

c. Would the proposed project be in compliance with local and state air quality requirements?
Yes. The proposed project will generate exhaust emissions from the use of on-road vehicles and off-road construction equipment that are in compliance with all applicable state and federal emissions standards. Fugitive dust emissions will be reduced through the use of standard mitigation measures.

e. What types of air emissions, including fugitive emissions, would be anticipated from the proposed project, and what would be the maximum annual rate of emissions for the project?

Project air emissions were calculated using emission factors from AP-42 and a list of expected equipment and vehicles to be used during construction. Maximum annual emissions assume construction of 100 miles of distribution line per year, and total emissions are for construction of the full 337-mile project. Construction of each mile is assumed to take three weeks. See Attachment B for additional details.

	Maximum per Year	Total for Project
□ SO_x	0.03 tons	0.11 tons
□ NO_x	15.69 tons	52.89 tons
□ PM - 2.5	0.18 tons	0.59 tons
□ PM - 10	0.99 tons	3.33 tons
□ CO	9.75 tons	32.86 tons
□ CO_2	3,329.54 metric tons	11,219.88 metric tons
□ Lead	Negligible	Negligible
□ H_2S	Negligible	Negligible
□ Organic solvent vapors or other volatile organic compounds--List: Reference Table 3.3-2 below		
□ Hazardous air pollutants -- List: Reference Table 3.3-2 below		
□ Other -- List: Reference Table 3.3-2 below		
□ None		

Table 3.3-2. SPECIATED ORGANIC COMPOUND EMISSION FACTORS FOR UNCONTROLLED DIESEL ENGINES[a]

EMISSION FACTOR RATING: E

Pollutant	Emission Factor (Fuel Input) (lb/MMBtu)
Benzene[b]	9.33 E-04
Toluene[b]	4.09 E-04
Xylenes[b]	2.85 E-04
Propylene	2.58 E-03
1,3-Butadiene[b,c]	<3.91 E-05
Formaldehyde[b]	1.18 E-03
Acetaldehyde[b]	7.67 E-04
Acrolein[b]	<9.25 E-05
Polycyclic aromatic hydrocarbons (PAH)	
Naphthalene[b]	8.48 E-05
Acenaphthylene	<5.06 E-06
Acenaphthene	<1.42 E-06
Fluorene	2.92 E-05
Phenanthrene	2.94 E-05
Anthracene	1.87 E-06
Fluoranthene	7.61 E-06
Pyrene	4.78 E-06
Benzo(a)anthracene	1.68 E-06
Chrysene	3.53 E-07
Benzo(b)fluoranthene	<9.91 E-08
Benzo(k)fluoranthene	<1.55 E-07
Benzo(a)pyrene	<1.88 E-07
Indeno(1,2,3-cd)pyrene	<3.75 E-07
Dibenz(a,h)anthracene	<5.83 E-07
Benzo(g,h,l)perylene	<4.89 E-07
TOTAL PAH	1.68 E-04

[a] Based on the uncontrolled levels of 2 diesel engines from References 6-7. Source Classification Codes 2-02-001-02, 2-03-001-01. To convert from lb/MMBtu to ng/J, multiply by 430.
[b] Hazardous air pollutant listed in the *Clean Air Act*.
[c] Based on data from 1 engine.

10/96 Stationary Internal Combustion Sources 3.3-7

7. Hydrologic Conditions/Water Quality

a. What nearby water bodies may be affected by the proposed project? Provide distance(s) from the project site.

There are five water bodies greater than 40 acres within five miles of the project, the Pacific Ocean, Shasta Lake, Lake Selmac, Galesville Reservoir, and an unnamed swamp. There are an additional 61 creeks, rivers, or sloughs measuring over 0.5 miles in length within 0.25 miles of the project.

NHD Rivers/Streams within 0.25 mile of the Project[1]			
River	***Creeks***		***Other***
Klamath River	Mears Creek	Mill Creek	Fortune Branch
East Fork Illinois River	Hazel Creek	Woodford Creek	Kerby Ditch
Illinois River	Boulder Creek	Hoppaw Creek	Althouse Slough
Sacramento River	North Salt Creek	Turwar Creek	Kerby Slough
Scott River	Slagle Creek	Spruce Creek	Brown Slough
	Granite Creek	Sucker Creek	
	Cow Creek	Little Elder Creek	
	Quines Creek	Bear Creek	
	Tunnel Creek	Chapman Creek	
	McCollum Creek	Little Grayback Creek	
	Grave Creek	Page Creek	
	Cindy Creek	Tycer Creek	
	Copper Creek	Elder Creek	
	Alice Creek	Althouse Creek	
	Wolf Creek	Kelly Creek	
	Clear Creek	Cove Creek	
	Rat Creek	Holton Creek	
	Dog Creek	George Creek	
	Elk Creek	Little Humbug Ck.	
	Vesa Creek	Empire Creek	
	Kinsman Creek	McGuffy Creek	
	Little Ferry Creek	Big Ferry Creek	
	Collins Creek	Dutch Creek	
	Wooliver Creek	Buckhorn Creek	
	Everill Creek	Beaver Creek	
	Muck-a-Muck Creek		

[1] Water features listed are rivers and flow streams identified in the National Hydrography Dataset

E. REGULATORY COMPLIANCE

1. For the following laws, describe any existing permits, new or modified permits, manifests, responsible authorities or agencies, contacts, etc., that would be required for the proposed project

i. Floodplains and Wetlands Regulations: ☒ **Modification Required**

Describe: Impacts to floodplains and wetlands will be avoided, but it may be necessary to delineate wetlands and waterways and initiate consultation with state water boards and the US Army Corp of Engineers (USACE) to determine if impacts require specific permitting.

NETL F 451.1-1/3
Revised: 12/3/2014
Reviewed: 12/3/2014
(Previous Editions Obsolete)

U.S. DEPARTMENT OF ENERGY

ENVIRONMENTAL QUESTIONNAIRE