

5.4 BIOLOGICAL RESOURCES

5.4.1 Environmental Setting

5.4.1.1 Biological Resources Technical Report

The *Biological Resources Technical Report* (BRTR) is Appendix C to this document and details the desktop and field analyses conducted to identify vegetation communities, aquatic features, and special status species occurring within and potentially affected by the project segment in California. The following discussion of the environmental setting is largely a summarization of the BRTR and references specific sections or appendices of the BRTR for full details.

5.4.1.2 Survey Area (Local Setting)

The Biological Resources Survey Area (BRSA) includes the entire Caltrans right-of-way along US 395 and the Lassen County rights-of-way along County Route A3 and Cummings Road, plus ancillary facilities, staging areas, and materials storage yards outside these rights-of-way (Appendix C, Figure A-2). The project segment requires a relatively narrow construction, but the full width of the Caltrans and Lassen County transportation rights-of-way would allow the project segment to shift if necessary to avoid sensitive resources or due to engineering constraints. Thus, the BRSA contains all areas that could be directly impacted, temporarily or permanently, by the project segment and can accommodate any changes to project limits or design that may occur during project development. The BRSA consists of both private and public lands, including Bureau of Land Management (BLM), USFWS, and CDFW land ownerships.

The BRSA overlaps three ecoregions of California: Eastern Cascade Slopes and Foothills, Northern Basin and Range, and Central Basin and Range (Griffith et al. 2016). Elevation within the BRSA ranges from approximately 4,006 ft to 5,570 ft. The topography of the BRSA varies from level to moderately sloped foothills and high mountain passes. The surrounding landscape has similar topography as well as some high mountain peaks, with Eagle Peak being the highest mountain near the BRSA, approximately 15 miles east of Modoc County MP 6.8, at a height of 9,892 ft. Refer to Section 1.2.2 of the BRTR (Appendix C) for a detailed description of the physical conditions of the BRSA.

5.4.1.3 Vegetation Communities and Land Cover

Stantec mapped natural vegetation communities in the BRSA to the alliance level as described in *A Manual of California Vegetation, Second Edition* (MCV) (Sawyer et al. 2009) and updated in the current online edition (CNPS 2019). Stantec then used *A Guide to Wildlife Habitats of California* (CWHR) (Mayer and Laudenslayer 1988) to convert the mapped MCV natural vegetation communities and field-delineated waters of the U.S. and state in the BRSA to wildlife habitat communities. MCV is ideal for determining natural vegetation communities and identifying sensitive natural communities; however, CWHR methods are more appropriate for identifying and describing habitat communities as they pertain to wildlife use. Hereafter, “natural vegetation communities” refers to MCV methods, and “habitat communities” refers to



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CWHR methods, which are used exclusively in discussions of wildlife use. Stantec biologists also reviewed each field-mapped natural vegetation community against the *California Natural Community List* to identify sensitive natural communities within the BRSA (CDFW 2019a).

Natural Vegetation Communities (MCV)

Stantec mapped 61 natural vegetation communities in the BRSA to the alliance or association level (Figure 3 in BRTR Appendix D). Western juniper (*Juniperus occidentalis*) woodland alliance occurs throughout the BRSA and was the most common type of tree-dominated vegetation community observed (431.1 acres [ac]). For shrubland vegetation communities, big sagebrush (*Artemisia tridentata*) alliance was the most common throughout the BRSA (2,025.8 ac). Cheatgrass grassland (*Bromus tectorum*) alliance occurs throughout the BRSA, especially in disturbed roadside areas, and was the most common herbaceous community observed (395.9 ac). The most common other alliance observed in the BRSA was areas of little or no vegetation (1,275.5 ac), including roads, road shoulders, structures, and parking areas. Refer to the *Botanical Resources Report* (Section 4.1 in BRTR Appendix D) for detailed descriptions of natural vegetation communities in the BRSA and figures depicting their locations.

Sensitive Natural Communities

CDFW considers 22 of the 61 mapped natural vegetation communities in the BRSA to be sensitive natural communities (Table 5.4-1). Refer to the *Botanical Resources Report* (Appendix C: Appendix D, Section 4.1) for detailed descriptions of sensitive natural communities in the BRSA and figures depicting their locations.

Table 5.4-1: Sensitive Natural Vegetation Communities in the Biological Resources Survey Area

Alliance	Association	Area (Acres)
Forests and Woodlands		
Jeffrey pine forest	<i>Pinus jeffreyi</i> / <i>Purshia tridentata</i>	6.46
Aspen groves	<i>Populus tremuloides</i> / <i>Symphoricarpos rotundifolius</i>	0.48
Black cottonwood forest	<i>Populus trichocarpa</i>	0.18
Shrublands		
Little sagebrush scrub	<i>Artemisia arbuscula</i> ssp. <i>arbuscula</i> / <i>Poa secunda</i> ¹	192.03
Silver sagebrush scrub ³	<i>Artemisia cana</i> (ssp. <i>bolanderi</i> , ssp. <i>viscidula</i>) / <i>Poa secunda</i> ²	0.93
Bitterbrush scrub	<i>Purshia tridentata</i> – <i>Artemisia arbuscula</i> ³	22.48
	<i>Purshia tridentata</i> – <i>Artemisia tridentata</i> – <i>Tetradymia canescens</i>	39.51
	<i>Purshia tridentata</i> – <i>Artemisia tridentata</i> / <i>Bromus tectorum</i> ²	5.52
	<i>Purshia tridentata</i> – <i>Artemisia tridentata</i>	416.89
	<i>Purshia tridentata</i> – <i>Prunus subcordata</i> ²	1.26



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Alliance	Association	Area (Acres)
Interior rose thickets	<i>Rosa woodsii</i>	7.11
Shining willow groves	<i>Salix lucida</i> – <i>Rosa woodsii</i> / Mixed Herbs ²	3.81
Greasewood scrub	<i>Sarcobatus vermiculatus</i> – <i>Artemisia tridentata</i> ¹	198.02
Herbaceous Vegetation		
Sheldon's sedge patch ²	<i>Carex sheldonii</i> – <i>Elymus cinereus</i> ^{1,3}	3.39
One spike oat grass meadows ²	<i>Danthonia unispicata</i> – <i>Poa secunda</i> ¹	7.46
Ashy ryegrass meadows	<i>Elymus cinereus</i> – <i>Alopecurus geniculatus</i> ^{2,3}	22.63
	<i>Elymus cinereus</i> ³	46.24
Blue bunch wheat grass meadows	<i>Pseudoroegneria spicata</i> – <i>Poa secunda</i>	19.37
Hardstem bulrush marshes	<i>Schoenoplectus acutus</i>	0.14
American bulrush marsh	<i>Schoenoplectus americanus</i>	0.07
Needle-and-thread grassland ²	<i>Stipa comata</i> ¹	0.71
Tansyleaf evening primrose patch ²	<i>Taraxia tanacetifolia</i> – <i>Iva axillaris</i> ¹	70.26

Notes:

1. Association not described in the MCV but is presumed sensitive because it is like other sensitive associations under the alliance or is dominated by uncommon native species.
2. Association not described in the MCV but is included within an existing alliance in MCV that is designated as sensitive
3. *Leymus cinereus* is no longer an active name, though it is still used in the MCV. *Elymus cinereus* is used exclusively to reflect current nomenclature.

Source: Sawyer et al. 2009; CNPS 2019b

Habitat Communities (CWHR)

Stantec mapped 16 CWHR habitat communities within the BRSA, including sagebrush (2,407.60 ac), Jeffrey pine (6.46 ac), juniper (507.84 ac), aspen (0.48 ac), montane riparian (57.52 ac), bitterbrush (478.37 ac), montane chaparral (1.12 ac), alkali desert scrub (278.36 ac), annual grassland (393.75 ac), perennial grassland (437.40 ac), wet meadow (48.62 ac), fresh emergent wetland (0.48 ac), riverine (27.99 ac), irrigated hayfield (42.68 ac), urban (1.52 ac), and barren (1,275.66 ac). Refer to the *Biological Resources Technical Report* (Appendix C: Appendix D, Section 3.1.1.2 and Figure A-2) for detailed descriptions of habitat communities in the BRSA and their mapped locations, respectively.

5.4.1.4 Aquatic Features

Stantec identified 238.21 ac of potential waters of the U.S. and state¹ within the BRSA, which includes 14.25 ac of riparian wetlands, 26.48 ac of riparian fresh emergent wetland complexes, 67.22 ac of fresh emergent wetlands, 94.70 ac of seasonal wetlands, 1.40 ac of wetland swales, 1.75 ac of wetland seep

¹ All aquatic features meeting the definition of Waters of the US or Waters of the State have been delineated and the analysis contained herein reflects impacts to both. For purposes of this analysis, it is conservatively assumed that each feature meets the more stringent water of the State standard. The final identification of WOUS and WOS will be determined by USACE and the waters of the State will be confirmed by the RWQCB.



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springs, 12.75 ac of perennial streams, 2.32 ac of intermittent streams, 3.76 ac of ephemeral streams, 3.82 ac of irrigation canals, 0.02 ac of vegetated ditches, 0.12 ac of non-vegetated ditches, and 9.62 ac of ponds. Refer to the *Delineation of Potential Waters of the U.S.* report (Appendix C: Appendix B, Section 4.0) for complete details of the waters of the U.S. and state in the BRSA, including figures depicting their locations.

5.4.1.5 Habitat Assessment

Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing and Proponent's Environmental Assessments (CPUC 2019) defines special status species as species that are listed, candidates, or proposed for listing under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA); plants listed as rare or endangered under the California Native Plant Protection Act; species that meet the definitions of rare and endangered under CEQA; plants considered by the California Native Plant Society (CNPS) to be "rare, threatened or endangered in California" (California Rare Plant Rank 1A, 1B, 2A, and 2B), as well as California Rare Plant Rank 3 and 4 plant species; species designated by CDFW as Fully Protected or as a Species of Special Concern; species protected under the Bald and Golden Eagle Protection Act; Birds of Conservation Concern or Watch List species; and bats considered by the Western Bat Working Group to be "high" or "medium" priority. Collectively, species that meet any of these designations will be referred to as "special status species" in this document.

Stantec biologists evaluated the potential for special status species to occur within the BRSA based on field-collected and publicly available occurrence records and the availability of potential habitat. They identified 212 special status species known to or potentially occurring in at least part of the BRSA, including 127 plants, 19 mammals, 47 birds, five amphibians, 4 one reptile, 40 ten fish, and 3 three invertebrates known to or potentially occurring in at least part of the BRSA. Stantec biologists observed 55 special status species within the BRSA, including 38 plants, one mammal, and 16 birds. Tables 3-4 and 3-5 in the BRTR (Appendix C) provide the conservation status, habitat characteristics, and potential to occur for special status plant and wildlife species, respectively. The *Botanical Resources Report* (Appendix C; Appendix D, Section 4.4) provides further details about special status plants, including locations of Stantec's field-collected records. Figure A-2 of the BRTR (Appendix C) depicts the locations of special status wildlife species recorded by Stantec biologists.

5.4.1.6 Critical Habitat

No federally designated or proposed critical habitat occurs within the BRSA. One designated critical habitat polygon for Sierra Nevada yellow-legged frog (*Rana sierrae*) occurs approximately 4 miles west of the BRSA near Janesville. Six designated critical habitat polygons for Webber's ivesia (*Ivesia webberi*) occur within 5 miles of the BRSA, with the closest abutting the BRSA between Lassen County MP 0.7 and 1.0, approximately (USFWS 2020) (Appendix C, Figure A-3). No direct impacts would occur to designated critical habitats because these habitats occur outside of the BRSA. For measures that the applicant would implement to prevent potential indirect impacts, which would include but not be limited to



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wildfires, accidental spills, and introduction or spread of invasive plant species, refer to Section 5.4.5, Draft Environmental Measures.

5.4.1.7 Native Wildlife Corridors and Nursery Sites

Native Wildlife Corridors

In the BRSA, habitat corridors may consist of woodland riparian segments, canyons, wetlands, and ridgelines. Waterways may also serve as habitat corridors for fish and other species. Northeastern California falls within the Pacific Flyway, which has numerous narrow bird migration corridors that pass through the BRSA and the surrounding lands (PFC 2019).

The California Fish Passage Assessment Database (PAD) maps known and potential barriers to anadromous fish (CalFish 2020). Although no special status anadromous fish occur within the BRSA, the PAD-mapped barriers could also prevent or hinder movement of non-anadromous special status fish species that may occur in waterways in the BRSA. The PAD includes the following the waterway crossings within the BRSA:

- New Pine Creek between Modoc County MP 61.4 and 61.5 – remediated but fish response unconfirmed, meaning that the barrier structures were removed; however, there is no evidence of fish presence above the remediated site
- Cottonwood Creek between Modoc County MP 58.0 and 58.1 – remediated but fish response unconfirmed and unknown passage status
- Willow Creek between Modoc County MP 54.4 and 54.5 – remediated but fish response unconfirmed
- Lassen Creek between Modoc County MP 53.6 to 53.7 – partial barrier from steep culvert

The remaining waterways have either not been assessed or do not contain barriers, and therefore may serve as passages for special status fish.

The BLM Sierra Front Field Office considers the section of the BRSA from about Lassen MP 0.0 to MP 18.9 as mule deer (*Odocoileus hemionus*) movement corridor (Krause 2020). Mule deer generally use the movement corridors from March 1 to May 15 and from October 1 to November 30 (BLM 2014). The project lies within the Caltrans US 395 right-of-way in this area, which likely serves a barrier to big game movement under existing conditions, and the BLM Sierra Front Field Office did not apply seasonal restrictions to these areas.

Native Wildlife Nursery Sites

Based on desktop reviews and habitat field surveys, no known regional and local native wildlife nursery sites occur within the BRSA. The BLM Eagle Lake Field Office (ELFO) noted that ELFO-designated pronghorn kidding (*Antilocapra americana*) kidding habitat occurs outside of the BRSA west of US 395 near Viewland and west of the BLM Ravendale Fire Station near Termo (Nelson 2020).



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5.4.1.8 Biological Resource Management Areas

~~Several~~ Seven biological resource management areas occur within 5 miles of the BRSA: USFWS' Modoc National Wildlife Refuge; CDFW's Bass Hill Wildlife Area, Biscar Wildlife Area, Doyle Wildlife Area, Hallelujah Junction Wildlife Area, and Honey Lake Wildlife Area; and The Nature Conservancy's Matley Ranch (GreenInfo Network 2019) (Figure 5.4-1). The BRSA crosses through portions of the Modoc National Wildlife Refuge, Doyle Wildlife Area, and Hallelujah Junction Wildlife Area and the other areas are within a five mile radius of the BRSA. ~~Where these areas overlap the BRSA, direct impacts would be limited to the construction work areas and would be restored to preconstruction conditions. For measures that the applicant would implement to mitigate direct impacts and prevent potential indirect impacts, which would include but not be limited to wildfires, accidental spills, and introduction or spread of invasive plant species, refer to Section 5.4.5, Draft Environmental Measures. Biological resource management areas that occur within 5 miles of the BRSA include USFWS' Modoc National Wildlife Refuge; CDFW's Bass Hill Wildlife Area, Biscar Wildlife Area, Doyle Wildlife Area, Hallelujah Junction Wildlife Area, and Honey Lake Wildlife Area; and The Nature Conservancy's Matley Ranch.~~

5.4.2 Regulatory Setting

5.4.2.1 Federal

Clean Water Act

The Clean Water Act (CWA), also known as the Federal Water Pollution Control Act of 1972, as amended (33 United States Code [USC] 1251 et seq.), was established to restore and maintain the chemical, physical, and biological integrity of waters throughout the U.S. Discharge of dredged or fill material into waters of the U.S., including wetlands, lakes, streams, rivers, and estuaries, is regulated under Section 404 of the CWA (EPA 2002). Section 404 is jointly implemented by the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (USACE), with the USACE issuing Section 404 permits and monitoring permit compliance (EPA 2019a). Section 404 permit applicants are also required to obtain a Section 401 water quality certification from the state or authorized tribe in the region where the discharge would originate (EPA 2019b). In California, the State Water Resources Control Board (SWRCB) regulates multi-regional projects, and the Regional Water Quality Control Boards (RWQCB) regulate specific regional projects (SWRCB 2019).

Federal Endangered Species Act

The federal ESA of 1973, as amended (16 USC 1531 et seq.), was established to protect and recover imperiled species and their habitats. Under the ESA, wildlife and plant species may be listed as either endangered or threatened and along with their critical habitat, if designated, are protected from actions that would cause take of any listed species except under federal permit. The USFWS and the National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) administer the ESA and consult with other federal agencies under Section 7 ~~or Section 10~~ of the ESA to ensure that their actions are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse



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modification of designated critical habitat for these species (USFWS 2013a). Further, when a non federal project has the potential to take listed species, such take can be authorized through the development of a Habitat Conservation Plan under Section 10 of the ESA.

Migratory Bird Treaty Act

Under the Migratory Bird Treaty Act (MBTA), it is unlawful to take any migratory bird or any part, nests, or eggs of migratory birds unless permitted by regulations (USFWS 2017). Migratory birds, as defined by the MBTA, include all species native to the U.S. or its territories, except some upland game birds (e.g., California quail [*Callipepla californica*]), that occur as a result of natural biological or ecological processes (1,026 total species). Non-native species introduced into the U.S. or its territories by intentional or unintentional human assistance are not included in the MBTA (USFWS 2013b).

Executive Order (EO) 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, was issued on January 10, 2001, by President Clinton to direct federal agencies that are taking actions that have or are likely to have a negative effect on migratory birds to develop and implement a Memorandum of Understanding with USFWS to promote conservation of migratory bird populations. This EO further implements the MBTA and requires coordination between the USFWS and federal agencies (USEO 2001).

On December 22, 2017, the U.S. Department of the Interior issued a legal opinion memorandum outlining an alternative interpretation of the MBTA as it applies to incidental or accidental take. The opinion concluded that the “MBTA's prohibition on pursuing, hunting, taking, capturing, killing, or attempting to do the same applies only to direct and affirmative purposeful actions that reduce migratory birds, their eggs, or their nests, by killing or capturing, to human control” (USDI 2017).

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 1940, as amended (16 USC 668-668c), prohibits take of bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) or any part, nests, or eggs of bald and golden eagles unless federally permitted. The Bald and Golden Eagle Protection Act also prohibits human-induced alterations around an unoccupied nest site if upon return of the eagle, the alterations result in adverse impacts on the eagle (USFWS 2018).

Executive Orders

Federal agencies are required to demonstrate that their actions comply with EOs, which are directives issued by the President to manage operations of the federal government. Relevant EOs include the following:

Executive Order 11988 – Floodplain Management

EO 11988, Floodplain Management, was issued on May 24, 1977, by President Carter to avoid adverse impacts associated with the occupancy and modification of floodplains and to avoid floodplain development wherever there is a practicable alternative. Under this EO, federal agencies are required to



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evaluate the potential effects of the action on the floodplain and to identify practicable alternatives to avoid adverse effects and incompatible development in the floodplains. Federal agencies are also required to provide opportunity for early public review of any plans or proposals for actions in floodplains (USEO 1977).

Executive Order 11990 – Protection of Wetlands

EO 11990, Protection of Wetlands, was issued on May 24, 1977, by President Carter to avoid adverse impacts associated with the destruction or modification of wetlands and to avoid new construction in wetlands wherever there is a practicable alternative. Under this EO, federal agencies are required to demonstrate that there is no practicable alternative to avoid wetlands for new construction and to include all practicable measures to minimize harm to wetlands that may result from the proposed action. Federal agencies are also required to provide opportunity for early public review of any plans or proposals for new construction in wetlands (USEO 1977).

Executive Order 13112 – Invasive Species and Executive Order 13751 – Safeguarding the Nation from the Impacts of Invasive Species

EO 13112, Invasive Species, was issued on February 3, 1999, by President Clinton to prevent the introduction of invasive species, to provide control of invasive species, to minimize impacts from invasive species, and to the establish the National Invasive Species Council. Federal agencies are required to prevent the introduction of invasive species and not authorize actions that could cause or promote the introduction or spread of invasive species. Federal agencies also need to identify all feasible and prudent measures to minimize the risk of harm caused by invasive species. This EO also revoked EO 11987, Exotic Organisms, which was issued by President Jimmy Carter in 1977 (USEO 1999).

EO 13751, Safeguarding the Nation from the Impacts of Invasive Species, was issued on December 5, 2016, by President Obama to amend EO 13112. EO 13751 directed continuing coordination of federal control and prevention of invasive species and maintained the National Invasive Species Council and Invasive Species Advisory Committee (USEO 2016).

The Federal Highway Administration (FHWA) issued Guidance on Invasive Species on August 10, 1999, in response to EO 13112. The FHWA guidance defined known invasive plants as those listed on the official noxious weed list of the state in which the activity occurs (FHWA 2019). In California, the California Invasive Species Advisory Committee under the Invasive Species Council of California developed and maintains the list of statewide invasive species (ISCC 2019).

5.4.2.2 State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) of 1969, as amended (Water Code Section 13000 et seq.), was established to provide a comprehensive program to protect water quality that applies to surface waters, wetlands, groundwater, and point and nonpoint pollution sources. Under the



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Porter-Cologne Act, the SWRCB and nine RWQCBs were created and authorized to implement state water quality regulations. The SWRCB oversees water rights and water quality policy, and the RWQCBs protect and enhance water quality at the regional and local levels. CWA Section 401 grants the SWRCB the authority to review proposed federally permitted or licensed activities that may impact state water quality and to certify, condition, or deny the activities if they do not comply with state water quality standards. RWQCBs may impose specific discharge prohibitions or requirements for activities that may affect any waters of the state, including isolated wetlands (SWRCB 2019). Per the 2001 U.S. Supreme Court decision of *Solid Waste Association of Northern Cook Counties v. United States Corps of Engineers* and the Porter-Cologne Act, RWQCBs retained the authority to regulate discharges of waste into any waters of the state regardless of whether the waters are subject to USACE jurisdiction under CWA Section 404 (SWRCB 2001).

California Endangered Species Act

The CESA of 1970, as amended (California Fish and Game Code [FGC] Sections 2050-2089), was established to conserve, protect, restore, and enhance any listed species and its habitat. The CESA prohibits the take of any species designated by the California Fish and Game Commission as endangered, threatened, or candidate species and protects all native animals and plants and their habitats that are threatened with extinction or experiencing significant declines that would lead to threatened or endangered designation if not halted. The CESA authorizes the CDFW to issue an Incidental Take Permit (FGC Sections 2081 and 2089) for state-listed species when specific criteria are met (CDFW 2019b). The CESA also outlines provisions for creation of Natural Community Conservation Plan for the purpose of conserving species and protecting and managing natural communities.

California Fish and Game Code

The FGC provides several provisions for the protection of state wildlife resources, including the following relevant sections:

Sections 1600-1616 – Lake and Streambed Alteration

Under Section 1602, CDFW has the authority to issue Lake or Streambed Alteration Agreements (LSAAs) for activities that substantially divert or obstruct the natural flow; substantially change or use any material from the bed, channel, or bank; or deposit or dispose of materials into any river, stream, or lake. Applicants are required to obtain a LSAA prior to commencing these activities in any river, stream, or lake, including features with ephemeral and perennial flow. The notification may also apply to specific activities within floodplains (CDFW 2019c).

Sections 1900-1913 – Native Plant Protection Act

The Native Plant Protection Act allows the California Fish and Game Commission to designate plants as endangered or rare. The Native Plant Protection Act prohibits take, possession, or sale within the state of any native-listed plants. The CDFW has the authority to enforce the provisions of this act and authorize incidental take permits for activities if deemed appropriate (CDFW 2019d).



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Sections 3500-3516 – Birds

The CDFW protects game birds, birds of prey, migratory birds, Fully Protected birds, and their nests and eggs from take or possession except as otherwise provided by the FGC (e.g., incidental take under CESA, state waterfowl hunting validations, etc.). In response to the U.S. Department of Interior's December 22, 2017, memorandum interpreting incidental take of migratory birds (USDI 2017), the CDFW and California Office of Attorney General published a legal guidance on November 29, 2018, affirming that California State Law will continue to prohibit the incidental take of migratory birds (CDFW 2018). On September 27, 2019, the California State Legislature passed the California Migratory Bird Protection Act (Assembly Bill 454) amending Section 3513 of the FGC, which clarifies that incidental but avoidable take of migratory birds is prohibited.

Sections 3511, 4700, 5050, and 5515 – Fully Protected Species

Prior to the CESA listings, California Statutes accorded a Fully Protected status to specifically identified birds, mammals, reptiles, amphibians, and fish. Most of these Fully Protected species have also been listed under the CESA. Fully Protected species cannot be taken or possessed, and no take licenses or permits (e.g., incidental take permit) can be issued except for collecting for scientific research and relocation for protection of livestock (CDFW 2019e).

5.4.2.3 Local

Below is a list of policies from the General Plans of Modoc, Lassen, and Sierra Counties that are most relevant to the project segment. Because CPUC has exclusive jurisdiction over project siting, design, and construction, the project is not subject to local land use and zoning regulations or discretionary permits. This section identifies local land use plans and regulations for informational purposes and to assist with CEQA review.

Modoc County General Plan

The following policies from the Conservation and Open Space Element of the Modoc County General Plan (Modoc County 1988) directly pertain to biological resources:

Wildlife

- **Policy #2** – Maintain countywide consistency on the types of fish and wildlife protection measures for mitigating adverse impacts on critical or sensitive wildlife habitats on a case-by-case basis. Similar consistency is desirable for protection measures for threatened and endangered species.
- **Policy #3** – Specific requirements to be considered for mitigating adverse impacts on critical or sensitive wildlife habitats, including habitat important to threatened or endangered species, shall be on a case-by-case basis with adequate consideration given to landowner needs.



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Timber/Vegetation

- **Policy #3** – Protect timber resources through vegetation program.
- **Policy #4** – Protect timber resources for its wildlife habitat and scenic resources.
- **Policy #5** – Protect officially listed rare and endangered plants in Modoc County which contribute to the natural diversity of plant life.

Lassen County General Plan

The following policies from the Natural Resources, Wildlife, and Open Space Elements of the Lassen County General Plan 2000 (Lassen County 1999) directly pertain to biological resources:

Vegetation

- **Policy NR26** – In order to avoid or reduce the extent of potential adverse impacts to important vegetation communities which may result from projects and land use decisions within its jurisdiction, the County shall consider the potential extent of such impacts in the course of project review.
- **Policy NR27** – Projects subject to County approval which will result in significant disturbance of a site's vegetative cover shall be required to prepare and implement as effective plan to revegetate disturbed, undeveloped areas of the site.
- **Policy NR28** – The County recognizes the need to identify and provide reasonable measures for the protection of rare and endangered plant species in the consideration of projects and land use decisions.
- **Policy N29** – The County supports strong measures to eliminate or prevent the spread of invasive and noxious weeds and plant species including but not limited to medusahead, yellow starthistle, and perennial peeperweed (whitetop), and to control the adverse effects from the excessive spreading of such species as juniper and cheatgrass.

Wildlife

- **Policy WE16** – The County supports interagency efforts to protect and restore the wildlife habitat values of lakes, riverine and riparian areas and wetlands.
- **Policy WE 17** – The County supports cooperative efforts to protect and enhance the wildlife habitat values of upland vegetation communities of bitterbrush, mountain mahogany, and aspen.



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Sierra County General Plan

The following policies from the Water Resources and Wildlife Elements of the Sierra County General Plan 2012 (Sierra County 2012) directly pertain to biological resources:

Water

- **Policy 22** – Protect natural swales and wetlands, plus a buffer from those features, for water quality protection.
- **Policy 31** – Preserve the integrity of water courses throughout the County.

Plants and Wildlife

- **Policy 2** – Within stream zones, control uses over which the County has jurisdiction- to prevent significant impacts on riparian and aquatic habitat.
- **Policy 3** – Prohibit removal of native vegetation in lake and stream zones except when done in conjunction with the permitted uses as described under #2, above.
- **Policy 4** – Protect bodies of water and their watersheds to prevent water degradation.
- **Policy 7** – Prohibit development on meadows.
- **Policy 8** – Protect, and whenever possible enhance, threatened, endangered, and special plants and animals and their habitats, as defined by the California Department of Fish and Game, as well as migratory birds from proposed land uses.
- **Policy 9** – Encourage and assist in efforts to sustain plant and animal populations for recreational and other values.
- **Policy 10** – Encourage the protection of natural populations which are unique and representative of the habitats of Sierra County and which could provide for educational and research purposes. Identify and preserve heritage and landmark trees and groves where appropriate.
- **Policy 17** – Discourage removal or significant disturbance of any remaining old growth forests.
- **Policy 21** – Protect all habitat types and the continuity of habitats.
- **Policy 22** – Protect critical deer migration corridors as well as the movement corridors of other animals. Protect the integrity and continuity of wildlife habitats.



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- **Policy 30** – Require monitoring of projects with the potential to significantly impact biotic resources.

5.4.3 Impact Questions

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>
g) Create a substantial collision or electrocution risk for birds or bats?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

5.4.4 Impact Analysis

For biological resources, permanent impacts would occur where permanent above-ground structures are located, such as underground vaults, which would each require 15-ft-by-3-ft areas of permanent surface



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disturbance, line markers, which would have a very small footprint (less than 1 ft by 1 ft each), and ILAs, which would include a combined footprint of approximately 1.15 acres. Temporary impacts are those impacts that would return to pre-construction conditions following the construction phase or within several years of construction completion. The BLM Deschutes Field Office, with whom the applicant is consulting as the lead federal agency, anticipates a “No Effect” determination for species listed under the ESA. In addition, the applicant does not anticipate needing an Incidental Take Permit from CDFW.

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

5.4.4.1 Special Status Plants

Less than Significant Impact. The project would avoid impacts on the majority of the special status plant species through siting and directional boring efforts and the project would not result in a population-level decline of any special status plant species; however, impacts to some individual special status plants may be unavoidable. Table 5.4-2 identifies the acreages of documented special status plants within a 10-foot buffer on either side of the running line. Where direct impacts are unavoidable site restoration would be implemented to help ensure plant site recurrence after construction is complete. Site restoration measures (APM BIO-5, Site Restoration) would facilitate occurrence recovery post-construction. If impacts cannot be avoided through project design, a conservation plan would be created (APM BIO-9, Special Status Plant Impacts). These measures will be implemented on all impacted lands, as described above, including those under private ownership.

Table 5.4-2: Special Status Plant Project Impacts

Special Status Plants	Direct Impact (Acres)
Purple loco weed <i>(Astragalus agrestis)</i>	<0.01 0.001
Snake milk-vetch <i>(Astragalus iodanthus var. diaphanoides)</i>	0.063
Sickle saltbush <i>(Atriplex gardneri var. falcata)</i>	0.5247
Slough sedge <i>(Carex atherodes)</i>	0.020
Sheldon's sedge <i>(Carex sheldonii)</i>	0.054
Great Basin calicoflower <i>(Downingia laeta)</i>	0.0329
Volcanic daisy <i>(Erigeron elegantulus)</i>	0.0105



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<u>Special Status Plants</u>	<u>Direct Impact (Acres)</u>
<u>Ephemeral monkeyflower</u> <u>(<i>Erythranthe inflatula</i>)</u>	<u><0.01</u> <u>0.002</u>
<u>Modoc frasera</u> <u>(<i>Frasera albicaulis</i> var. <i>modocensis</i>)</u>	<u>0.0329</u>
<u>Rigid pea</u> <u>(<i>Lathyrus rigidus</i>)</u>	<u>0.374</u>
<u>Canby's lomatium</u> <u>(<i>Lomatium canbyi</i>)</u>	<u>0.0437</u>
<u>Raven's lomatium</u> <u>(<i>Lomatium ravenii</i> var. <i>ravenii</i>)</u>	<u>2.6192</u>
<u>Adobe lomatium</u> <u>(<i>Lomatium roseanum</i>)</u>	<u>0.543</u>
<u>Sagebrush bluebells</u> <u>(<i>Mertensia oblongifolia</i> var. <i>oblongifolia</i>)</u>	<u>0.0216</u>
<u>Volcanic beardtongue</u> <u>(<i>Penstemon sudans</i>)</u>	<u>0.064</u>
<u>Williams's combleaf</u> <u>(<i>Polyctenium williamsiae</i>)</u>	<u><0.01</u> <u>0.0001</u>
<u>Spiny milkwort</u> <u>(<i>Polygala subspinosa</i>)</u>	<u>0.044</u>
<u>Winged dock</u> <u>(<i>Rumex venosus</i>)</u>	<u>0.50496</u>
<u>Many-flowered thelypody</u> <u>(<i>Thelypodium milleflorum</i>)</u>	<u>0.0659</u>
<u>Plummer's clover</u> <u>(<i>Trifolium gymnocarpon</i> ssp. <i>plummerae</i>)</u>	<u>0.40396</u>
<u>Total</u>	<u>5.3768</u>

Note: project components such as the ILAs, material storage yards, and several staging areas that are located outside the ROW are not included the direct impact numbers reported in Table 5.4-2, with the exception of the Alturas ILA, because these areas were identified after botanical surveys occurred. No special status plants were observed during surveys at the Alturas ILA. The remaining locations were assessed via desktop review and no habitat for special status plants was identified. Accordingly, it is assumed that no special status species will be impacted in these areas.

The project has been sited to avoid impacts to special status plant species to the extent possible. In instances where the applicant is not able to route the running line to avoid special status plant species, the project would avoid impacts by using directional boring techniques to install conduit under these occurrences. Directional boring uses a bentonite clay lubricant that in certain rare circumstances, could escape to the surface as a frac-out, which could smother plants in the area. The applicant would implement its Accidental Release Prevention Plan, which would detail measures such as monitoring and response actions in the event of a frac-out (APM HAZ-3, Accidental Release Prevention Plan). Where required, bore rigs and entry and exit bore pits would be placed a minimum of 75 ft from the edge of



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special status plant occurrences. Special status plant occurrences require a minimum bore depth below the surface to ensure that directional boring does not disturb the root zone and result in plant mortality. The applicant would incorporate a minimum bore depth into the project design, following the specifications in APM BIO-14, Minimum Bore Depth.

While the project would avoid impacts on the majority of the special status plant species through siting and directional boring efforts, some special status plants may be unavoidable (Table 5.4-2). Where direct impacts are unavoidable site restoration would be implemented to help ensure plant site recurrence after construction is complete. Site restoration measures (APM BIO-5, Site Restoration) would facilitate occurrence recovery post-construction. If impacts cannot be avoided through project design, a conservation plan would be created (APM BIO-9, Special Status Plant Impacts).

Table 5.4-2: Special Status Plant Project Impacts

Special Status Plants	Temporary Impact (Acres)
<u>Purple loco weed</u> (<i>Astragalus agrestis</i>)	<u>0.001</u>
<u>Snake milk vetch</u> (<i>Astragalus iodanthus</i> var. <i>diaphanoides</i>)	<u>0.063</u>
<u>Sickle saltbush</u> (<i>Atriplex gardneri</i> var. <i>falcata</i>)	<u>0.517</u>
<u>Slough sedge</u> (<i>Carex atherodes</i>)	<u>0.020</u>
<u>Sheldon's sedge</u> (<i>Carex sheldonii</i>)	<u>0.054</u>
<u>Great Basin calicoflower</u> (<i>Downingia laeta</i>)	<u>0.029</u>
<u>Volcanic daisy</u> (<i>Erigeron elegantulus</i>)	<u>0.005</u>
<u>Ephemeral monkeyflower</u> (<i>Erythranthe inflatula</i>)	<u>0.002</u>
<u>Modoc frasera</u> (<i>Frasera albicaulis</i> var. <i>modocensis</i>)	<u>0.029</u>
<u>Rigid pea</u> (<i>Lathyrus rigidus</i>)	<u>0.374</u>
<u>Canby's lomatium</u> (<i>Lomatium canbyi</i>)	<u>0.037</u>
<u>Raven's lomatium</u> (<i>Lomatium ravenii</i> var. <i>ravenii</i>)	<u>2.619</u>
<u>Adobe lomatium</u>	<u>0.543</u>



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<u>Special Status Plants</u>	<u>Temporary Impact (Acres)</u>
<u>(Lomatium roseanum)</u>	
<u>Sagebrush bluebells</u> <u>(Mertensia oblongifolia var. oblongifolia)</u>	<u>0.016</u>
<u>Volcanic beardtongue</u> <u>(Penstemon sudans)</u>	<u>0.064</u>
<u>Williams's combleaf</u> <u>(Polycotenum williamsiae)</u>	<u>0.0001</u>
<u>Spiny milkwort</u> <u>(Polygala subspinosa)</u>	<u>0.044</u>
<u>Winged dock</u> <u>(Rumex venosus)</u>	<u>0.496</u>
<u>Many flowered thelypody</u> <u>(Thelypodium milleflorum)</u>	<u>0.059</u>
<u>Plummer's clover</u> <u>(Trifolium gymnocarpon ssp. plummerae)</u>	<u>0.396</u>
<u>Total</u>	<u>5.368</u>

The applicant does not anticipate that herbicides would be used as part of project construction or operation. However, if an agency requests that invasive weeds be treated with herbicides, Special status plant mortality could result from herbicide use for invasive plant control. Special status plants could also be impacted by, as well as fuel or other chemical spills, if overspray or a spill occurs on or near special status plants. The applicant would avoid or minimize potential impacts from hazardous materials by implementing a series of measures. Approved invasive plant control contractors would apply herbicides to populations of invasive weeds identified in work areas in coordination with the requesting agency and in adherence with state and manufacturer guidelines. In addition, the applicant would implement measures to handle, store, and transport hazardous materials safely (APM HAZ-1, Prepare and Implement a Hazardous Materials Release Prevention Plan and a Spill Prevention, Countermeasure, and Controls Plan), and to prevent spills associated with refueling and maintenance (APM HAZ-2, Worker Environmental Awareness Program for Hazardous Materials). The applicant would also develop and implement a project-specific SWPPP during construction that would describe the measures and steps to prevent, contain, and clean up spills of hazardous materials (APM HYDRO-1, Prepare and Implement a Stormwater Pollution Prevention Plan).

Special status plant occurrences could also be impacted by wildfires accidentally sparked by construction vehicles and equipment under dry conditions. To avoid wildfires, the applicant would instruct construction



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crews about the danger of wildfires and ways to prevent fires, including prohibiting idling over vegetated areas (APM FIRE-1, Construction Fire Protection Plan). In addition, all work vehicles would be equipped with a fire extinguisher, and crews would be trained to put out incipient brush fires when it is safe to do so. The applicant does not plan to conduct any welding as part of the project. The effects of spills and fires could be temporary or permanent depending on the species or population affected, the type of habitat affected, the severity of the incident, and the effectiveness of response efforts.

Introduction of invasive species to a new area could become a permanent impact without immediate and follow-up treatment. To prevent special status plant occurrence impacts from the introduction and spread of invasive plants, the applicant would ensure that all construction equipment and vehicles are cleaned inside and out prior to arrival onsite. If invasive plants are observed within a work area, vehicles, equipment, and personnel clothing and boots would be swept or cleaned prior to deployment to a different construction spread (APM BIO-6, Invasive Species). Site restoration measures (APM BIO-5), including using native soils for backfill and re-seeding disturbed areas with native plant mixes, would help to ensure that adjacent areas are restored to pre-construction conditions and would prevent the spread of invasive plant species.

A biological monitor (APM BIO-7, Biological Monitors) would be onsite to demarcate exclusion areas around special status plant occurrences with flagging or signage to ensure that project activities would remain outside of exclusion areas. These exclusion areas and restoration measures would avoid permanent impacts and reduce potential temporary impacts on special status plant species and their habitats. The applicant would restrict vehicle and equipment access to approved project areas only (APM BIO-2, Work Areas and Access Routes), which would be located outside of special status plant occurrences. With the implementation of these exclusion area measures and the measures previously discussed in this section, the project would not impact any special status plant species at a population level and would not be unlikely to have significant impacts on special status plants in the BRSA.

The applicant expects operational impacts to be minimal as all project access would occur at vault and ILA locations. The vaults and ILAs would be located outside of special status plant occurrences, and thus, compaction from overland travel from the adjacent highway and shoulder to the vaults and ILAs would not impact these species. Therefore, construction and operation of the project would have a less than significant impact on special status plants with mitigation incorporated.

5.4.4.2 Special Status Wildlife

Less than Significant Impact. This section evaluates the potential impacts of project construction and operation on special status wildlife within the BRSA. The project is about 193 miles long, with 85 special status fish and wildlife species that are known to or potentially occur in the BRSA. Given the scale of the project, the impact analysis addresses special status animals collectively unless an impact uniquely affects a species or species group. The discussion is organized by three general types of impact: mortality or injury, sensory disturbance (i.e., noise, vibration, and visual), and habitat loss or modification.



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Mortality or Injury

Several project activities or elements could result in mortality or injury of wildlife; however, nearly all the potential for mortality or injury would occur during construction as project activities during operations and maintenance would be minimal. During construction, project vehicles and equipment could collide with wildlife within the BRSA, causing mortality or injury. Wildlife collisions could occur on vegetated or unvegetated portions of the right-of-way or project access roads. Trench excavation and plowing could harm wildlife underground. Sedentary and less mobile animals, such as amphibians, would be at greater risk of collisions at the surface or of being harmed underground. More mobile animals would likely be able to avoid construction vehicles and equipment approaching occupied sites, but the potential for collisions would still exist.

The risk of wildlife collisions could increase with certain seasonal changes in animals' behavior, including breeding, migration, and dormancy. Migratory birds are generally very mobile and would be able to avoid construction equipment, but eggs and young birds would be more susceptible to crushing, mortality, or injury by equipment during the breeding season. Adults may suffer mortality or injury while defending their nests or less mobile young. Similarly, some adult birds may remain still and quiet in response to a threat or disturbance. To avoid collisions with wildlife, the applicant would restrict vehicles and equipment use to designated work areas and approved access roads (APM BIO-2, Work Areas and Access Routes) and would enforce speed limits for vehicles and equipment on the right-of-way and access roads (APM BIO-3, Speed Limits).

The applicant would also implement additional measures to minimize the potential for direct mortalities or injuries of migratory birds and bats during soil disturbing or vegetation management construction activities. Biologists would conduct preconstruction bird nest surveys during the breeding season and establish exclusionary buffers around the nests to avoid disturbances to the adults or young. Construction activities would be prohibited within the exclusionary bird nest buffer until the nest fledged or failed (APM BIO-11, Nesting Birds). Additionally, biological monitors would establish a 300-foot no-vegetation clearing buffer around active nest until the nest has fledged or failed (~~APM BIO-11, Nesting Birds~~)(~~APM BIO-16, Vegetation Clearing for Birds and Bats~~). If tree- or bridge-roosting bats are documented, the applicant would ~~not remove the tree and would~~ contact agencies for further guidance (APM BIO-16, Bats). The applicant would also conduct construction activities only during daylight hours, ~~to the extent practicable, some night work may be possible to the extent practicable~~ (APM BIO-10, Work Timing), ~~);~~ have biological monitors onsite (APM BIO-7), ~~);~~ and ensure that all onsite personnel receive Worker Environmental Awareness Training prior to starting work on the project (APM BIO-1, Worker Environmental Awareness Training).

Open trenches or other excavations could result in mortality or injury of wildlife that fall in and become trapped. To avoid this impact, the applicant would backfill or cover open excavations at the end of each workday. When this is not possible, the applicant would install escape ramps of sufficient slope to allow wildlife to escape (2:1 slope or less), and biological monitors would inspect excavations that remained open overnight before construction activities begin each morning (APM BIO-13, Open Excavations).



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The applicant would not construct in or on the banks of fish-bearing waterways, avoiding the possibility of direct mortality or injury of special status fish and other special status aquatic wildlife. To avoid waterways, the applicant would attach cables to bridges or use directional boring to go underneath waterways and some wetlands. The applicant would avoid or minimize the potential for mortalities or injuries of fish and other in-water special status animals in the event of a frac-out during boring by implementing its Accidental Release Prevention Plan (APM HAZ-3). In wetlands that could not be avoided, the applicant would minimize the potential for mortality or injury impacts to special status wildlife by implementing APM BIO-15, Wetland Impacts, as discussed in Section 5.4.1.3, Vegetation Communities and Land Cover, which calls for constructing during the dry season among other steps.

Sedimentation of wetlands, rivers, and other waters as a result of construction-related ground disturbance and erosion could also result in mortality or illness of special status aquatic species within or near the BRSA. Suspended and deposited sediment introduced to aquatic features from project-related stormwater runoff or erosion could result in mortality or injury of fish and amphibians by impeding oxygen exchange at the gills, reducing available fish spawning and rearing habitats, reducing available interstitial spaces for amphibian cover and breeding habitats, suffocating developing embryos, reducing growth rates in larvae, and negatively affecting prey (Pilliod et al. 2003; Chapman et al. 2014). The applicant's project-specific SWPPP would describe the measures and steps to prevent and control erosion and sediment transport into aquatic habitats (APM HYDRO-1).

Mortalities and illness could also directly result from herbicide use for invasive plant control, as well as fuel or other chemical spills, if any animal comes in direct contact with overspray or a spill. Similarly, spills could cause mortality or illness indirectly if water or prey are contaminated. As discussed in the special status plant impacts analysis, the applicant would avoid or minimize potential impacts from hazardous materials through APM HAZ-1 and APM HYDRO-1.

Construction vehicles and equipment operation could accidentally spark wildfires under dry conditions. To avoid wildfires, the applicant would compile a Construction Fire Prevention Plan which, among other measures, would instruct construction crews about the danger of wildfires and ways to prevent fires, including prohibiting idling over-vegetated areas (APM FIRE-1, ~~APM FIRE-2~~). In addition, all work vehicles would be equipped with a fire extinguisher, and crews would be trained to put out incipient brush fires when it is safe to do so. The applicant does not plan to conduct any welding as part of the project.

Trash created by project personnel could attract predators, such as common ravens (*Corvus corax*) or raccoons (*Procyon lotor*). The applicant would practice good housekeeping during project activities (APM UTL-2, Recycling of Construction Materials) to minimize the potential impacts on fish and wildlife through increased predation. Likewise, the applicant would prohibit project personnel from having dogs onsite to avoid potential harm to local wildlife (APM BIO-4, General Project Area Use).

During the operation phase, the risks of mortality or injury of fish and wildlife would be very low. Once the conduit is installed underground, most parts of the running line would not require regular maintenance or even inspection. Rather, inspection and maintenance would be infrequent and would typically be conducted from the vault or ILA sites unless underground segments of the conduit are damaged in other



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locations. Maintenance personnel would usually reach the vault or ILA sites by foot, although in some instances light trucks or all-terrain vehicles could be used. If off-pavement or off-gravel vehicle travel is required, the applicant would instruct crews to use a spotter to attempt to avoid wildlife, including nesting birds, or driving over woody vegetation. All APMs implemented during construction would be implemented during operation, as applicable. With implementation of APMs BIO-1, BIO-2, BIO-3, BIO-4, BIO-10, BIO-11, BIO-13, BIO-15, BIO-16, HAZ-3, HYDRO-1, FIRE-1, ~~FIRE-2~~, and UTL-2 impacts to special status species related to mortality or injury would be reduced to less than significant.

Sensory Disturbances

During construction, noise and vibrations associated with equipment operation and an increased presence of humans outside of vehicles and equipment could result in direct sensory impacts on special status wildlife within or near the BRSA. Wildlife responses to sensory disturbances may include displacement from or avoidance of suitable habitat near construction activities and stress. Displacement or avoidance of areas could divert time and energy away from important activities like foraging, reproduction, and parental care (Frid and Dill 2002). Stress of wildlife may also result in indirect impacts on the health and reproductive fitness of individuals, and potentially local populations.

Project activities near active migratory bird nests pose the greatest potential for adverse sensory disturbance impacts for migratory birds, as they may affect reproductive success. The applicant would identify active nests during pre-construction surveys and daily sweeps and would prohibit project activities near them to avoid potential adverse impacts on migratory bird nests (APM BIO-7 and APM BIO-11). Sensory disturbances of greater sage-grouse (*Centrocercus urophasianus*) during lekking would potentially have adverse impacts on breeding success for the individuals associated with the lek. Leks are groups of male greater sage-grouse that gather to perform courtship displays from about March to mid-May for a group of females in or near suitable breeding habitat (Hall et al. 2008). The size of leks may range from a few individuals to several hundred. Though no active greater sage-grouse leks were observed during wildlife surveys in 2020, the applicant would prevent impacts on any greater sage-grouse leks that may be present by avoiding construction activities within 4 miles of active or developing leks from 6 PM to 9 AM between March 1 and May 15 (APM BIO-12, Greater Sage-grouse Leks).

In wetlands and waterways where directional boring would occur, the bore rigs would be set back 15 ft beyond the top of waterway banks or a minimum of 75 ft from the edge of wetland vegetation (APM HAZ-3). Therefore, the potential for noise and vibration impacts as a result of boring on species inhabiting those aquatic habitats would be substantially reduced or avoided altogether.

Per Caltrans permitting requirements, no construction will take place at night. However, if allowed and required in extenuating circumstances, nighttime construction lighting could cause disorientation to some special status wildlife species within or near the BRSA that could cause adverse effects. Some wildlife species use natural light sources and patterns for navigation, interspecific interactions, and other critical biological behaviors (Longcore and Rich 2004). Introduction of artificial nighttime lighting could disrupt foraging, reproduction, and communication. The applicant would restrict construction activities to daylight hours (APM BIO-10) to avoid potential impacts from nighttime lighting. If nighttime work is



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allowed and required, lights would be shielded and/or pointed downward and into work areas, and not into surrounding areas.

The applicant would install the conduit and fiber optic cable along well-traveled highways and roads, within Caltrans and County rights-of-way. It is assumed that nearby wildlife would already be acclimatized to at least some levels of sensory disturbance from the passing traffic and from occasional road and utility maintenance crews. Any resulting sensory impacts on wildlife would be expected to be intermittent and temporary, occurring during work hours and ceasing after construction activities have moved from a given area. In general, construction activities would proceed in a linear fashion, and the applicant estimates that up to 1 mile of conduit would be installed and the ground restored per day, per spread.

During operation, the risks of sensory disturbance of wildlife would be greatly reduced or absent. Once the conduit is installed, most parts of the running line would not require regular maintenance or even inspection. Rather, most maintenance would be conducted from vault and ILA sites. Maintenance personnel would typically reach the vault and ILA sites on foot, although in some instances light trucks or all-terrain vehicles could be used. Maintenance activities are typically not loud and would usually be accomplished quickly during daylight hours with crews of just one to several people. With implementation of APMs BIO-7, BIO-10, BIO-11, BIO-12, and HAZ-3, impacts to special status species related to sensory disturbance would be reduced to less than significant.

Habitat Loss or Modification

Construction activities would result in impacts on some special status wildlife through the loss or modification of wildlife habitat within the BRSA. Vehicles and equipment traveling over the right-of-way would trample or crush vegetation and plowing, and trenching for conduit installation would remove some vegetation. The duration of the impacts could be temporary or permanent depending on the location. Permanent impacts would occur where permanent above-ground structures are constructed, such as underground vaults, which would each require 15-ft-by-3-ft areas of permanent surface disturbance every 3,500 feet, and line markers, which would each have a very small footprint (less than 1 ft by 1 ft) and which would be colocated with vaults. ILAs would be permanent above-ground structures, with a combined footprint of 1.15 acres. There would be no permanent impacts to riparian habitat or sensitive natural communities.

In areas with grasslands or other fast-growing habitat communities, impacts would be short-term, and vegetation would be expected to return to pre-construction conditions quickly. Revegetation measures would be coordinated in landowner agreements for those areas where project construction disturbs private landscaping. In areas dominated by slower-growing plant species, such as shrublands and woodlands, impacts could have short or long-term temporary impacts. Loss of sagebrush is considered a long-term temporary impact, as sagebrush may take several years to recover from disturbances under favorable conditions (McArthur and Kitchen 2007). Alkali scrub recovery from severe disturbance may take several years and would be a long-term temporary impact. Recovery of forested areas, such as Jeffrey pine, juniper, and aspen, would also be considered long-term temporary impacts (Mayer and Laudenslayer 1988); however, the applicant does not plan to clear trees for the project. Table 5.4-3



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identifies the acreages of temporary and permanent impacts on CWHR habitat communities by the project.

Table 5.4-3: CWHR Habitat Community Project Impacts

CWHR Habitat Community	Temporary Impacts (Acres)	Permanent Impact (Acres) ¹
Jeffrey Pine	1.143	--
Juniper	40.2435	0.0329
Aspen	0.190	≤0.0101
Montane Riparian	<0.010.000 ²	<0.010.000 ²
Bitterbrush	25.854	0.0219
Sagebrush	200.104	0.143
Montane Chaparral	<0.010.0003	--
Alkali Desert Scrub	7.3216	<0.010.003
Annual Grassland	51.160	0.033
Perennial Grassland	40.690	0.031
Wet Meadow	4.1769	---
Fresh Emergent Wetland	0.024	--
Riverine	<0.010.000 ²	<0.010.000 ²
Irrigated Hayfield	0.4768	--
Urban	0.294	---
Barren	82.9656	0.044
Total	454.6093	0.300

Note:

1. Permanent above-ground structure locations are approximate and permanent impact acreage is subject to change.
2. Implementation of APM BIO-5 would avoid impacts to all aquatic or riparian habitat communities.

CWHR = *A Guide to Wildlife Habitats of California*

Source: Mayer and Laudenslayer 1988

The applicant would implement several measures that would reduce the amount of habitat loss or modification, including restricting vehicle and equipment travel to approved project areas (APM BIO-2); backfilling trenches and recompacting loose soils above the conduit after installation (APM BIO-13); using directional boring methods to install conduit under, rather than through, some aquatic and sensitive habitats; and restoring work areas to pre-construction conditions where feasible (APM BIO-5). Where directional boring occurs, bore rigs and entry and exit bore pits would be placed a minimum of 15 ft beyond the top of waterway banks and a minimum of 75 ft from the edge of wetland vegetation. For wetlands that cannot be avoided, the applicant would implement APM BIO-15, as discussed in Section 5.4.1.3, Vegetation Communities and Land Cover, to minimize and mitigate the associated habitat



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impacts. The project would also temporarily avoid direct impacts on vegetation in proposed workspaces within 300 ft of active migratory bird nests until after the young have fledged or the nest failed (APM BIO-7, and APM BIO-11, ~~and APM BIO-16~~).

Several additional construction-related factors could result in habitat loss or modification. As described above, sensory disturbances associated with equipment noise and the increased presence of personnel could cause displacement or avoidance of species. This would effectively amount to temporary habitat loss within or near the BRSA, although the associated impacts would end when construction activities cease. Habitats could also be modified through the introduction or spread of invasive plants and animals. Invasive species could be introduced to new areas via contaminated soil attached to vehicles and equipment entering the BRSA or moving from one part of the BRSA to another. Overspray or misuse of herbicides for invasive plant control, frac-outs, or accidental spills of hazardous materials could also adversely alter both aquatic and upland habitats. In addition, fire associated with construction equipment and personnel could result in habitat loss or modification.

The effects of spills and fires would typically be temporary, with the duration of impacts depending on the type of vegetation affected, the severity of the incident, and effectiveness of response efforts. Introduction of invasive species to a new area can increase in duration or become a permanent impact without immediate and follow-up treatment. To prevent habitat impacts from the introduction and spread of invasive plants, the applicant would ensure that all construction equipment and vehicles are cleaned inside and out prior to arrival onsite. If invasive plants are observed within a work area, vehicles, equipment, and personnel's clothing and boots would be swept or cleaned prior to deployment to a different construction spread (APM BIO-6). Potential habitat loss or modification from improper herbicide use, frac-outs, spills of hazardous materials, and fires would be avoided or reduced by the implementation of avoidance and minimization measures: APM BIO-4, APM FIRE-1, ~~APM FIRE-2~~, APM HAZ-1, APM HAZ-3, and APM HYDRO-1).

Habitat loss and modification can result in habitat fragmentation, which may have numerous impacts on fish and wildlife resources. However, due to the relatively small areas of expected ground disturbance for the project (a 20-ft-wide corridor for vehicle and equipment travel, less than 30 in. wide for conduit trench or plow line, and 15-ft-by-3-ft areas for vaults approximately every 3,500 ft), habitat fragmentation would be minimal. In addition, the project would be constructed along highways within existing transportation rights-of-way, which already have fragmented local habitats and serve as potential barriers to movement.

The removal or modification of vegetation may create edge habitats, which could indirectly decrease the likelihood of migratory bird young fledging from their nests. Brown-headed cowbirds (*Molothrus ater*) prefer woodland-grassland transitional (i.e., edge) habitats, which facilitate the species parasitizing the nests of other birds (Lowther 1993). Female cowbirds may lay 40 eggs per season in the nests of other migratory bird species, and the young often out-compete the hosts' young for food. Although brown-headed cowbirds are common throughout much of the BRSA and surrounding areas (eBird 2020), the project is unlikely to contribute to increases of this species or in nest parasitism. The applicant would avoid tree removal; therefore, no additional woodland-grassland edge habitats would be created. During operation, habitat removal or modification would be unlikely, occurring only in the event that repairs are



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required, and conduit must be excavated. With implementation of APMs BIO-2, BIO-4, BIO-5, BIO-7, BIO-11, BIO-13, BIO-15, ~~BIO-16~~, FIRE-1, HAZ-1, HAZ-3, and HYDRO-1, impacts to special status species related to habitat modification would be reduced to less than significant.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?

Less than Significant Impact. The applicant designed the project to avoid sensitive natural communities. In areas where the running line could not be routed to avoid sensitive resources, directional boring techniques would be used to install conduit under these features where feasible. The applicant’s Accidental Release Prevention Plan would provide measures to minimize impacts if frac-out occurs (APM HAZ-3). Where required, bore rigs and any entry and exit bore pits would be placed a minimum of 75 ft from the edge of sensitive natural communities. The applicant would incorporate a minimum bore depth into the project design to not disturb the root zone, following the specifications in APM BIO-14.

For sensitive communities that cannot be avoided (~~Table 5.4-4~~), the applicant would restore the ~~temporary~~ impacted areas to their pre-construction contours and would re-seed with localized native seed mixes (APM BIO-5), restoration would occur on all impacted areas including those under private ownership. A biological monitor (APM BIO-7) would be onsite to demarcate exclusion areas around the sensitive natural communities with flagging or signage to ensure that project activities would remain outside of exclusion areas. The applicant would restrict vehicle and equipment access to approved project areas only (APM BIO-2). Table 5.4-4 identifies the acreages of sensitive natural communities that fall within the proposed ADIBRSA that would be directly impacted.

Table 5.4-4: Sensitive Natural Vegetation Community Project Impacts

Sensitive Natural Vegetation Community Alliance	Temporary Direct Impact (Acres) [±]
Forests and Woodlands	
Jeffrey pine forest	1.143
Aspen groves	0.194
Black cottonwood forest	0.0657
Shrublands	
Little sagebrush scrub	16.01
Silver sagebrush scrub	--
Bitterbrush scrub	24.092
Interior rose thickets	0.713
Shining willow groves	0.163
Greasewood scrub	7.1438



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Sensitive Natural Vegetation Community Alliance	Temporary Direct Impact (Acres) ¹
Herbaceous Vegetation	
Sheldon's sedge patch	0.800
One spike oat grass meadows	0.342
Ashy ryegrass meadows	2.834
Blue bunch wheat grass meadows	0.224
Hardstem bulrush marshes	0.024
American bulrush marsh	--
Needle-and-thread grassland	0.204
Tansyleaf evening primrose patch	0.0329
Total	53.9658

1 No permanent impacts to sensitive natural communities are anticipated

Plant mortality in sensitive natural communities could result from herbicides, fuel, or other chemicals, if overspray or a spill occurs on or near sensitive communities. The applicant would implement several measures, as previously discussed for special status plants in Section 5.4.4.1, Special Status Plants, including APM HAZ-1 and APM HYDRO-1. To avoid wildfires, the applicant would implement APM FIRE-1 and APM FIRE-2, would equip all work vehicles with a fire extinguisher, and would train crews to put out incipient brush fires when it is safe to do so. The effects of hazardous chemicals and fires could be temporary or permanent depending on the occurrence affected, the type of vegetation community affected, the severity of the incident, and the effectiveness of response efforts.

Introduction of invasive species to sensitive natural communities could become a permanent impact without immediate and follow-up treatment. To prevent impacts from the introduction and spread of invasive plants, the applicant would thoroughly clean staff clothing and footwear and the interior and exterior of all construction equipment and vehicles prior to arrival onsite or travel to different areas within the BRSA (APM BIO-6). Site restoration measures (APM BIO-5), including using native soils for backfill and re-seeding disturbed areas with native plant mixes, would ensure that areas adjacent to sensitive natural communities are restored to pre-construction conditions and would prevent the spread of invasive plant species.

The applicant expects operational impacts to be minimal as all project access would occur at vault locations. The vaults would be located outside of sensitive natural communities, thus compaction from overland travel from the adjacent highway and shoulder to the vaults would not impact these communities. Therefore, construction and operation of the project would have a less than significant impact on riparian habitats or other sensitive natural communities identified in local or regional plans, policies, regulations, or by CDFW or USFWS.

In addition to sensitive natural communities, the BRSA crosses through portions of three biological resource management areas: USFWS' Modoc National Wildlife Refuge, CDFW' Doyle Wildlife Area, and CDFW' Hallelujah Junction Wildlife Area. Where these three areas overlap the BRSA, direct impacts



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would be limited to the construction work areas and the applicant would restrict vehicle and equipment access to approved project areas only (APM BIO-2). The applicant would restore the temporary impacted areas to their pre-construction contours and would re-seed with localized native seed mixes (APM BIO-5). Measures that the applicant would implement to prevent potential indirect impacts would include but are not limited to wildfires (APM FIRE-1 and APM FIRE-2), accidental spills (APM HAZ-1, APM HAZ-2, and APM HYDRO-1), and introduction or spread of invasive plant species (APM BIO-6).

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less than Significant Impact. The applicant would avoid all waterways and most wetlands (Table 5.4-5 ~~by~~) by installing conduit under features using directional boring techniques or by attaching the cables to bridges, where available. Entry and exit pits along the running line would be located a minimum of 15 ft from top of bank of waterways and a minimum of 75 ft from the edge of wetland vegetation to avoid any direct impacts and to avoid or minimize potential indirect impacts. An Accidental Release Prevention Plan would be prepared and implemented (APM HAZ-3) in the event of a frac-out during horizontal boring. In addition, the applicant would develop and implement a project-specific SWPPP (APM HYDRO-1) to prevent contamination of adjacent waterbodies and wetlands during construction.

For wetlands that cannot be avoided (Table 5.4-5) with project siting, directional boring, or attaching to bridges, the applicant would perform construction activities in the wetland during the dry season (generally May through September) while the features are dry. If wetlands are perennial or do not fully dry due to local weather conditions, a coffer dam with appropriately sized bypass pumps (if needed) would be installed to dewater the area prior to the activities. Only temporary impacts on wetlands are anticipated, and the applicant would restore temporarily disturbed areas to pre-construction conditions ~~to the extent practicable~~. If changes during final design could result in permanent impacts that cannot be avoided, the applicant would compensate for the permanent loss of wetlands at a ratio of at least 1:1 at a location that is acceptable to the U.S. Army Corps of Engineers and the Regional Water Quality Control Board; however, final compensation ratios would be based on site-specific information and would be determined through coordination with the applicable resource agencies as part of the permitting processes for the project. Additionally, a Revegetation and Restoration Plan with detailed specifications for restoring all temporarily disturbed wetlands in accordance with project permits would be prepared (APM BIO-15). This plan will ensure that there is no net loss of either water of the U.S. or waters of the State in terms of both acreages and functions and values.



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Table 5.4-5: Potential Waters of the U.S. and State Project Impacts

Potential Waters of the United States and State	Temporary Impact (Acres) ¹
Wetlands	
Riparian Wetland	0.19
Riparian Fresh Emergent Wetland Complex	0.35
Fresh Emergent Wetland	1.41
Seasonal Wetland	0.38
Wetland Swale	0.08
Other Waters	
Pond	0.000001<0.01
Total	2.410

¹ No permanent impacts to waters of the U.S. or State are anticipated

To avoid or minimize indirect impacts from hazardous materials, spill kits would be provided at all locations where hazardous materials are being stored (APM HAZ-1) and refueling and maintenance for all vehicles and equipment would be prohibited within 100 ft of wetlands and other waters (APM HAZ-2). Also, a biological monitor (APM BIO-7) would be onsite to demarcate exclusion areas around most wetlands and all waterways with flagging or signage to ensure that project activities remain outside of exclusion areas. Therefore, construction and operation of the project would have a less than significant impact on state or federally protected wetlands with mitigation incorporated.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less than Significant Impact. The applicant would install the conduit and fiber optic cable along well-traveled highways and roads within Caltrans and Lassen County rights-of-way. These highways and roads experience high traffic volumes, which likely disrupts movement of many species to some extent. Existing roads often separate and isolate plant and animal habitats and sever corridors, acting as a physical barrier to movement or inducing avoidance behavior for some species and causing mortalities or injuries for some others (Ascensão et al. 2016; Bennett 2017; Jacobson et al. 2016). It is assumed that wildlife that are present within or in proximity to the BRSA would already exhibit at least some level acclimatization to disturbances from the passing traffic and from occasional road and utility maintenance crews. However, to minimize potential adverse effects on wildlife moving through the BRSA, the applicant would restrict vehicles and equipment use to designated work areas and approved access roads (APM BIO-2), enforce speed limits for vehicles and equipment on the right-of-way and access roads (APM BIO-3), conduct construction activities during daylight hours, (APM BIO-10), have biological monitors



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onsite (APM BIO-7), and ensure that all onsite personnel receive Worker Environmental Awareness Training prior to starting work on the project (APM BIO-6). Additionally, the applicant would backfill or cover open excavations at the end of each workday to prevent wildlife moving through the project area from being entrapped. When this is not possible, the applicant would install escape ramps of sufficient slope to allow wildlife to escape (2:1 slope or less), and project biologists would inspect excavations that remained open overnight before construction activities begin each morning (APM BIO-13). Refer to Section 5.4.4.2 "Sensory Disturbances" for a discussion of potential impacts on greater sage-grouse and their leks. Therefore, construction and operation of the project would have a less than significant impact on the movement of any native resident or migratory fish and wildlife species, with established migratory wildlife corridors, or the use of native wildlife nursery sites would be less than significant with mitigation incorporated.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant Impact.~~No Impact.~~ As described, the project would result in potential impacts to vegetation and special status species. However, the majority of project impacts on biological resources would be temporary and associated with site preparation and construction activities. In addition, the applicant would incorporate APMs to reduce potential conflicts. As a result, ~~the applicant does not anticipate project-related conflicts with local policies or ordinances protecting biological resources.~~ Therefore, construction and operation of the project would ~~have no impact~~ result in a less than significant impact on local policies and ordinances protecting biological resources.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The project does not occur within any current Habitat Conservation Plans or Natural Community Conservation Plans and the applicant does not anticipate project-related conflicts with approved local, regional, or state conservation plans. Therefore, construction and operation of the project would have no impact on any approved local, regional, or state habitat conservation plans.

g) Create a substantial collision or electrocution risk for birds or bats?

Less than Significant Impact. During construction, there is the potential for vehicle and equipment collisions with wildlife; however, the applicant would restrict vehicles and equipment use to designated work areas and approved access roads (APM BIO-2) and would enforce speed limits for vehicles and equipment on the right-of-way and access roads (APM BIO-3). The applicant would further minimize the potential for collision impact with migratory birds by conducting pre-construction nest surveys and establishing exclusionary buffers around active nests until the nest fledged or failed (APM BIO-11). Additionally, the applicant would conduct construction activities during daylight hours -(APM BIO-10) to further minimize the potential for collision impact on bats and nocturnal birds. The applicant does not plan to build aboveground facilities that would provide risk for electrocutions or collisions with structures or



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wires. Therefore, construction and operation of the project would have a less than significant impact on the risk for collision or electrocution for birds and bats with mitigation incorporated.

5.4.5 Draft Environmental Measures

~~The applicant sited the running line not only to meet engineering requirements and constraints, but also to avoid or minimize impacts on sensitive cultural, aquatic, and biological resources. Caltrans initially directed the applicant to route the running line close to the outer edges of the transportation right-of-way; however, the applicant adjusted the placement of the running line within the Caltrans right-of-way to avoid sensitive resources. These adjustments involved shifts within the right of way on same side of the road, or in some cases, placing the running line on the opposite side of the road.~~

~~The applicant would also avoid impacts on some sensitive resources by using directional boring methods to install the conduit under these resources rather than through them. Bores beneath water bodies would average between 4 and 10 feet but up to 15 feet below the water body bed. Bores beneath culverts would average 2 to 3 feet below the bed or approximately 4 feet below the water's surface.~~

~~The following AMPPMS would be implemented by the applicant to reduce potential impacts on biological resources. In addition to project siting to avoid known locations of sensitive or protected resources, the applicant would also implement measures that would avoid or minimize impacts on special status plants and animals, sensitive natural communities, and waters of the U.S. and state. The APMs apply to the project's potential impacts on biological resources.~~

APM BIO-1: Worker Environmental Awareness Training

The applicant will prepare and implement a Worker Environmental Awareness Training to be presented by the Lead Biologist to all onsite personnel prior to commencing construction (i.e., staging vehicles or equipment), and, subsequently, all new workers. The applicant will document training for all workers. Training will instruct personnel how to identify sensitive resources and the locations of sensitive resource exclusion areas. Personnel will be instructed about roles and responsibilities in protecting sensitive biological resources, including penalties for violations, conducting sweeps for wildlife around equipment and vehicles before moving them, parking and driving only in approved areas, and stopping work immediately and notifying onsite biological and cultural monitors if sensitive resources are encountered. Handling and relocating special status species by non-approved personnel will be prohibited. APMs shall be implemented during construction by the applicant or the applicant's designee.

APM BIO-2: Work Areas and Access Routes

The applicant will confine all equipment, vehicles, and construction work within approved access routes and work areas to the maximum extent possible. Approved access routes and work areas will be clearly marked using stakes, flagging, or other means. No work, staging, or ground disturbance will occur outside of approved access routes and work areas. If off-pavement or gravel vehicle travel is required, the



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applicant will instruct personnel to use a spotter. APMs shall be implemented during construction by the applicant or the applicant's designee.

APM BIO-3: Speed Limit

Vehicles and equipment will adhere to a 15 miles per hour speed limit on all unpaved project access roads. APMs shall be implemented during construction by the applicant or the applicant's designee.

APM BIO-4: General Project Area Use

The applicant will prohibit trash dumping, firearms, hunting, open fires (those not required for project activities), smoking outside designated areas, and pets in project areas. -APMs shall be implemented during construction by the applicant or the applicant's designee.

APM BIO-5: Site Restoration

Ground disturbance and vegetation clearing will be limited to the minimum extent practicable. Open excavations will be backfilled and recompactd after installation of the conduit with native soils-. At locations where the excavated material is not adequate to use for backfilling, construction crews will remove it from the project workspaces and dispose of it at a location that meets California Department of Transportation's (Caltrans') requirements. In areas where backfill material must be imported (e.g., areas where excavated material has high rock content), the applicant will obtain soils from weed-free, commercially available sources approved by Caltrans. After completion of project activities, all temporarily disturbed work areas will be restored to their pre-construction contours, and areas of exposed soils in natural habitats will either be stabilized or re-seeded with native native-seed mixes appropriate to the habitat type or stabilized. Non-natural habitats, such as agricultural, urban, and barren areas, are maintained by landowners and will not be revegetated except as described in lease or access agreements.

In coordination with BLM and USFS, tThe applicant will prepare and implement a Revegetation and Restoration Plan (RRP) with detailed specifications for restoring all temporarily disturbed native vegetation in accordance with project permits. The RRP will discuss mitigation and restoration methods where vegetation is temporarily or permanently impacted. The RRP will include plants and seed mixes that will be used for temporary and permanent revegetation, plant container sizes and appropriate planting methods, and maintenance requirements, including irrigation needs and design plans that will show the specific plant species and planting locations. APMs shall be implemented during construction by the applicant or the applicant's designee.

APM BIO-6: Invasive Species

To prevent the introduction and spread of invasive plants during construction, the applicant will ensure that all construction equipment and vehicles are cleaned inside and out prior to arrival onsite. Incoming vehicles and wheeled or tracked equipment will be inspected by a biological monitor prior to deployment onsite. If invasive plants are observed within a work area, vehicles, equipment, and personnel clothing



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and boots will be swept or cleaned prior to deployment to a different construction site. If application of herbicides is needed to control designated noxious weeds, only approved weed control contractors would apply herbicides in adherence with all state and manufacturer's guidelines. APMs shall be implemented during construction by the applicant or the applicant's designee.

APM BIO-7: Biological Monitors

The applicant will appoint a Lead Biologist and one or more biological monitors. Biological monitors will be onsite daily during project activities to minimize incidental impacts to sensitive biological resources by conducting pre-construction surveys and sweeps, ensuring compliance with all avoidance and minimization measures, demarcating sensitive biological resource exclusion areas (e.g., active den or nest, special status plant occurrence, sensitive natural community, or wetland or waterway boundary) with flagging or signage, and ensuring that flagging and signage remain intact and that project activities remain outside of exclusion areas. If a special status species is encountered in the work areas, construction in the immediate vicinity will cease, and personnel will notify the biological monitors. Biological monitors will establish a buffer to restrict work near the species. If it is a wildlife species, a biological monitor will observe the behavioral responses of the species to the work occurring in proximity to them. The biological monitors will halt work if a wildlife species exhibits an adverse response to nearby project work activities. The species will be allowed to move offsite on their own. If the species is in danger of injury or does not leave the work area, the biological monitor will relocate the species to adjacent suitable habitat, if feasible, and with prior approval from the California Department of Fish and Wildlife and/or the U.S. Fish and Wildlife Service or will consult with agencies for further guidance. APMs shall be implemented during construction by the applicant or the applicant's designee.

APM BIO-8: Protection of Botanical Resources

The locations of the special status plants will be marked as avoidance areas both in the field; using flagging, staking, fencing, or similar devices; and on construction plans. Locations shall be incorporated into project siting, design, avoidance, and management in accordance with APM BIO-7 and APM BIO-9. APMs shall be implemented during construction by the applicant or the applicant's designee.

APM BIO-9: Special Status Plant Impacts

If additional special status plants are identified during pre-construction surveys and, complete avoidance is not practicable, ~~and the project would directly or indirectly affect more than 10 percent of a local occurrence by either number of plants or extent of occupied habitat~~, a conservation and restoration plan shall be implemented in coordination with a qualified biologist where the project would directly or indirectly affect more than 10 percent of a local occurrence by either number of plants or extent of occupied habitat. The conservation plan may consist of but is not limited to purchase of mitigation credits at a regional conservation bank; collection and subsequent planting of seed or incorporating seed from native nursery into seed mix used for revegetation efforts; stockpiling, storing, and replacing topsoil containing the local seed bank; or other measures determined practicable based on the species and site conditions. For some species and site conditions, conservation bank credits and seed may not be available, or conservation efforts may not have a reasonable probability of success or could result in



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detrimental effects on existing special status plant populations. In these cases, as determined by a qualified biologist, no conservation measures will be required. APMs shall be implemented during construction by the applicant or the applicant's designee.

APM BIO-10: Work Timing

Construction activities will be restricted to daylight hours. ~~If nighttime work is required, lights will be shielded and/or pointed downward and into work areas, and not into surrounding areas.~~ APMs shall be implemented during construction by the applicant or the applicant's designee.

APM BIO-11: Nesting Birds

Biological monitors will conduct pre-construction nesting bird surveys during the nesting season (February 1 to August 31) within 100 feet of the construction workspaces for non-raptors, and within 0.5 mile for raptors. Pre-construction surveys for non-raptors would be valid for 1 week, and surveys for raptors would be valid for the full season if conducted after May 1. Biological monitors will establish exclusionary buffers, in which no activity would be permitted, around active nests, which would be 100 feet for non-raptors and 0.25 mile for raptors, increasing to 0.5 mile for bald eagles, golden eagles, ferruginous hawks (*Buteo regalis*), Swainson's hawks (*Buteo swainsoni*), and prairie falcons (*Falco mexicanus*) when nests are in line-of-sight. In addition, no vegetation clearing would be permitted within 300 feet of an active non-raptor nest. Project activities will be prohibited within the exclusionary buffer until the nest fledged or failed. To the extent possible, work will be scheduled during the non-breeding season or in construction spreads that lack active nests. APMs shall be implemented during construction by the applicant or the applicant's designee.

APM BIO-12: Greater Sage-grouse Leks

The applicant will avoid construction activities within 4 miles of active or pending greater sage-grouse leks from 6 PM to 9 AM between March 1 and May 15. [Additional information pending further consultation with BLM]. APMs shall be implemented during construction by the applicant or the applicant's designee.

APM BIO-13: Open Excavations

The applicant will backfill or cover open excavations at the end of each workday to avoid wildlife entrapment. When this is not possible, the applicant will install escape ramps overnight to allow wildlife to escape (2:1 slope ratio or less), and a biological monitor will inspect excavations that remained open overnight before construction activities begin each morning. APMs shall be implemented during construction by the applicant or the applicant's designee.

APM BIO-14: Minimum Bore Depth

The applicant will impose minimum bore depths when boring under sensitive natural communities and special status plant occurrences to prevent root damage and plant mortality. The minimum depths are 30 feet for tree-dominated, 23 feet for shrub-dominated, and 15 feet for herbaceous-dominated communities



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or occurrences. APMs shall be implemented during construction by the applicant or the applicant's designee.

APM BIO-15: Wetland Impacts

The applicant will avoid directly impacting wetlands; however, for wetlands that cannot be avoided, or for which direct, temporary disturbance (e.g., trenching) outweighs the risk of effort-intensive avoidance techniques (e.g., boring) the applicant will implement the following measures. APMs shall be implemented during construction by the applicant or the applicant's designee.:

- Construction activities within wetlands will be performed during the dry season (e.g., generally May through September) while the features are dry.
- If construction activities are required in perennially wet features or if features do not fully dry due to local weather conditions, the applicant will prepare a Dewatering Plan prior to construction to outline dewatering procedures. This plan will be prepared as part of the Stormwater Pollution Prevention Plan (SWPPP) and its contents will be dictated by the applicant's Construction General Permit. For example, the Dewatering Plan shall include provisions for screening pump intake pipes to exclude fish; relocating fish from areas proposed for dewatering; and measures to control and monitor water quality during dewatering activities. a coffer dam with appropriately sized bypass pumps (if needed) will be installed to dewater the area prior to the activities.
- As currently designed, only temporary impacts on wetlands are anticipated, and the applicant will restore temporarily disturbed areas to pre-construction conditions -and according to applicable permit requirements. If changes during final design could result in permanent impacts that cannot be avoided, the applicant will compensate for the permanent loss of wetlands at a ratio of at least 1:1; however, final compensation ratios will be based on site-specific information and will be determined through coordination with the applicable resource agencies as part of the permitting processes for the project.

APM BIO-16: ~~Vegetation Clearing for Birds and Bats~~

~~If vegetation clearing occurs during nesting bird season (February 1 to August 30) biological monitors will establish a 300-foot no-vegetation clearing buffer around active nests that shall remain in place until the nest has fledged or failed. Prior to tree removal, attaching cables to bridges, a biological monitor will conduct pre-construction surveys for roosting bats, and if present, the trees will not be removed.~~ construction activities will not be permitted on the bridge until a biological monitor determines that the roost is no longer active. -APMs shall be implemented during construction by the applicant or the applicant's designee.

