# DETERMINATION OF BIOLOGICALLY EQUIVALENT OR SUPERIOR PRESERVATION (DBESP) ANALYSIS FOR MSCHP RIPARIAN-RIVERINE AND VERNAL POOL RESOURCES FOR VALLEY-IVYGLEN SUBTRANSMISSION LINE PROJECT, PHASE 1 RIVERSIDE COUNTY, CALIFORNIA

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**October 2014**

**AMEC Project No. 1255400498**

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## ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| AMEC | AMEC Environment & Infrastructure, Inc. |
| APM | Applicant Proposed Measure |
| BMPs | Best Management Practices |
| BTR | MSHCP Biological Technical Report |
| BUOW | burrowing owl |
| CDFW | California Department of Fish and Wildlife |
| CEQA | California Environmental Quality Act |
| CNDDB | California Natural Diversity Database |
| CNPS | California Native Plant Society |
| CPUC | California Public Utilities Commission |
| DBESP | Determination of Biologically Equivalent or Superior Preservation |
| DEIR | Draft Environmental Impact Report |
| $^{o}$ F | degrees Fahrenheit |
| FEIR | Final Environmental Impact Report |
| $ft^2$ | square feet |
| HCP | Habitat Conservation Plan |
| HMMP | Habitat Mitigation and Monitoring Plan |
| kV | Kilovolt |
| LBV | Least bell's vireo |
| LWSP | light-weight steel pole |
| MBTA | Migratory Bird Treaty Act |
| MM | Mitigation Measure |
| MSHCP | Western Riverside County Multiple Species Habitat Conservation Plan |
| O&M | Operation and Maintenance |
| PMR | Project Modification Report |
| PSE | Participating Special Entity |
| PVC | polyvinyl chloride |
| RCA | Regional Conservation Authority |
| RCHCA | Riverside County Habitat Conservation Agency |
| ROW | Right-of-Way |
| RWQCB | Regional Water Quality Control Board |
| SAA | Streambed Alteration Agreement |
| SCE | Southern California Edison |
| SKR | Stephen's Kangaroo Rat |
| SWFL | Southern Willow Flycatcher |
| TSP | tubular steel pole |
| USACE | U.S. Army Corps of Engineers |
| USDA | U.S. Department of Agriculture |

## ACRONYMS AND ABBREVIATIONS (Cont.)

| | |
|---|---|
| USFWS | U.S. Fish and Wildlife Service |
| USGS | U.S. Geological Survey |
| VIG | Valley-Ivyglen 115 kV Subtransmission Line |
| WRCC | Western Regional Climate Center |

# 1.0 INTRODUCTION

The Southern California Edison (SCE) Valley-Ivyglen 115 kilovolt (kV) Subtransmission Line (VIG) Project would improve reliability and meet projected electrical load requirements in the western Riverside County area. Accordingly, SCE proposes to construct, operate, and maintain a new 115 kV subtransmission line, approximately 25 miles long, connecting the existing SCE Valley Substation (near Perris, California) to the existing Ivyglen Substation (north of Lake Elsinore, California) (Figure 1). The VIG Project has been divided and will be constructed in two phases: Phase 1 (approximately 11.5 miles) and Phase 2 (approximately 13 miles).

SCE will be acquiring Project coverage under the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) as a Participating Special Entity (PSE) with the Regional Conservation Authority (RCA) providing the MSHCP consistency review. The MSHCP is a comprehensive, multi-jurisdictional plan focusing on the conservation of species and their associated habitats in western Riverside County. At this time, SCE is applying for coverage only for Phase 1 of the VIG Project. Phase 2 will be permitted separately. For the purpose of this report, the construction, maintenance and operation of Phase I of the VIG Project are herein considered and referred to as the "Project". This document provides a Determination of Biologically Equivalent or Superior Preservation (DBESP) analysis for *Riparian-Riverin*e and *Vernal Pool* Resources as required by the MSHCP.

A Draft Environmental Impact Report (DEIR) was prepared for the VIG Project by the California Public Utilities Commission (CPUC) in compliance with the California Environmental Quality Act (CEQA) in June 2009 (CPUC 2009). The Final Environmental Impact Report (FEIR) was certified 12 August 2010 and included responses to comments received during the DEIR public comment period (15 June through 31July 2009) and any text changes resulting from the comments submitted (CPUC 2010).

Since the time of Project approval in 2010, additional design changes resulted in the need for SCE to prepare a Project Modification Report (PMR) to support a Petition for Modification (PFM) with the CPUC. The Phase 1 design changes include a greater span over the San Jacinto River to avoid sensitive resources, a 300-foot underground stretch to cross under the existing 500 kV line, and an increase in width of access roads in some areas to comply with safety standards. The changes are minor regarding sensitive biological resources. Although the changes to Phase 1 are considered minor overall, the CPUC originally prepared one EIR for both Phases, and it is anticipated that one Supplemental EIR is being prepared that includes both Phases as well.

Per the MSHCP, if avoidance of biological resources is not feasible, a DBESP analysis shall be submitted to the RCA in order to provide the necessary information required for a MSHCP consistency determination. As such, this DBESP analysis has been prepared for impacts in order to ensure replacement of any lost functions and values of habitats and species, as related to the MSHCP. It provides the results of habitat assessments and focused studies that were conducted by AMEC Environment & Infrastructure, Inc. (AMEC) between 2006 and 2013. It also includes an examination of proposed impacts to *Riparian/Riverine* and *Vernal Pool* resources as a result of project implementation and presents avoidance, minimization, and mitigation measures that are proposed for resource protection and compensation.

The Project was designed to avoid all *Vernal Pools* in the Project area and there will be no direct or indirect permanent or temporary impacts to their functions or values. The original MSHCP PSE findings made by the RCA determined the Project to be consistent with the MSCHP when the project features adjacent to the San Jacinto River involved eight pole structures with spans ranging from 210 feet to 329 feet. The Clean Water Act (CWA) Section 401 Water Quality Certification and the California Fish and Game Code (CFGC) Draft 1602 Streambed Alteration Agreement were also issued using this same original project information. In addition, no issues regarding this area were raised during the 404 Nationwide Permit process. Nevertheless, the project has since been redesigned using only four taller poles that allow for three 700 foot spans. In addition, other features have been included as part of the project design that would result in impacts to biological resources, including additions and modifications to gabions crossing ephemeral drainages, additional tree trimming requirements in riparian areas for line clearance, additional staging yards, and the possible need for helicopters during construction.


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**Valley-Ivyglen Subtransmission Line Project Overview**
**MSHCP Biological Resources Technical Report for the Valley-Ivyglen Subtransmission Line Project, Phase 1**
**Riverside County, California**

1 inch = 1.5 miles
0 0.75 1.5 Miles

N

**FIGURE 1**

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## 1.1 Project Location and Study Area

The Project involves the construction of approximately 11.5 miles of new 115kV subtransmission line between the Valley Substation and the intersection of Third Street and Collier Avenue in the City of Lake Elsinore (Figure 2). The Project traverses unincorporated County of Riverside lands and the cities of Lake Elsinore, Perris, and Menifee, and is mapped on the Lake Elsinore and Romoland, California, U.S. Geological Survey (USGS) 7.5-minute series topographic quadrangles. Table 1 presents the Assessor Parcel Numbers through which the Project traverses.

**Table 1.**
**Phase I Valley-Ivyglen Subtransmission Assessor Parcel Numbers**

| APN | Owner |
|---|---|
| 331-190-041 | Croll |
| 331-190-052 | Croll |
| 345-310-023 | McBride Trust/Coudures Family, et al |
| 345-310-002 | McBride Trust/Coudures Family, et al |
| 345-310-013 | EVMWD |
| 345-310-005 | County Lands Riverside PIP IV |
| 345-310-001 | County Lands Riverside PIP IV |
| 345-300-010 | Lee |
| 345-150-020 | Ward |
| 345-150-018 | Ward (2nd easement pending outcome of rights study) |
| 349-100-045 | Gritton |
| 349-090-007 | State of CA |
| 349-090-025 | Marrelli |
| 347-100-017 | Fleck |
| 347-130-033 | White Rock Acquisition Co. |
| 347-120-049 | Rosetta Canyon Community Assoc. |
| 377-372-033 | 74 Self Storage |

The biological survey study area for the Project ranged from a 100-foot to 500-foot width buffer area on either side of the proposed Right-of-Way (ROW) centerline, depending on the requirements for each focused survey (i.e. rare plant, burrowing owl, fairy shrimp, riparian bird, etc.). Figure 2 provides an overview of the Project area and Appendix A1 of the MSHCP Biological Technical Report (BTR) (AMEC 2014) presents a detailed mapbook of the study area.

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**Project Location**
**MSHCP Biological Resources Technical Report for the Valley Ivyglen Subtransmission Line Project, Phase 1**
**Riverside County, California**

1 inch = 1 mile
0 0.5 1 Miles

N

**FIGURE 2**

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## 1.2 Project Description

The Project alignment extends westerly from the Valley Substation through the City of Perris and unincorporated Riverside County lands, ending at the intersection of Collier Avenue and Third Street in the City of Lake Elsinore (Figure 2). It is estimated that Project construction would start in early 2016 and require approximately 18 months for completion.

The Project will be installed in an existing SCE ROW where available, and in several new small areas where easements have been obtained from willing landowners in already developed areas. The Project has been divided into Segments 1, 2 and 3. A description of the Project route and construction and operation activities related to the implementation of the proposed Project is presented below. Appendix A1 of the BTR presents the Project route and related construction components, as currently designed.

### 1.2.1 Project Route

#### 1.2.1.1 Segment 1

The Approved Project route for Segment 1 would exit Valley Substation, located in unincorporated Riverside County, from the south and run approximately 3.9 miles west along the north side of the existing Serrano-Valley 500 kV Transmission Line ROW, briefly spanning the City of Perris and Interstate (I-) 215, and continuing in unincorporated Riverside County until it reaches Goetz Road. From Goetz Road, the line continues west for approximately 2.3 miles within the City of Perris, then re-enters unincorporated Riverside County and continues west for approximately 1.2 miles until crossing State Route (SR-) 74.

#### 1.2.1.2 Segment 2

For the Approved Project route for Segment 2, from the intersection of SR-74 and the 500 kV ROW, the line would continue parallel to the existing 500 kV ROW for approximately 0.1 mile, then turn south and span the ROW, and proceed east to the western edge of SR-74. From this point, the subtransmission line would proceed southwest along the west side of SR-74 to Conard Avenue.

#### 1.2.1.3 Segment 3

For the Approved Project route for Segment 3, from the intersection of SR-74 and Conard Avenue, the subtransmission line would then proceed southeast along Conard Avenue from SR-74 to Third Street. It would then turn southwest and proceed along Third Street, cross over Dexter Avenue, and enter the City of Lake Elsinore. The line would continue along Third Street, span I-15, and extend to the intersection of Third Street and Collier Avenue.

### 1.2.2 Subtransmission Line Design

#### 1.2.2.1 Poles

Approximately 318 poles would be installed, a majority of which (approximately 290 poles) would be light-weight steel poles (LWSPs) up to 75 feet in height. Approximately 20 LWSP guy poles would also be installed where LWSPs require additional support. At locations requiring higher clearance, approximately 28 of them, tubular steel poles (TSPs) will be used ranging between 80 and 115 feet in height above their footing, with one or two poles being approximately 135 feet in height.

Per SCE policy, SCE generally maintains a permanent clearance radius of approximately 25 feet around each TSP, and 10 feet around each LWSP. However, based on the sensitivity in some areas (e.g. San Jacinto River area), these permanent radii may be reduced to approximately 5-10 feet in coordination with Riverside County Fire Department and CPUC.

The LWSPs would be installed in holes bored approximately 24 to 36 inches in diameter and 10 to 14 feet deep into native soil. LWSPs would be placed in temporary laydown areas at each pole location. While on the ground, LWSPs may be configured (if not preconfigured) with the necessary crossarms, insulators, and wire-stringing hardware before being set in place using a line truck. Once the LWSPs are set in place, bore spoils (soil from holes drilled) would be used to back fill the hole. If the bore spoils are not suitable for backfill, imported clean fill material would be used. Excess bore spoils would be distributed at each pole site or used as backfill to fill holes left after removal of nearby wooden distribution poles. Where necessary, caissons would be used to protect LWSP. Caisson construction would include the placement of a 36-inch corrugated steel pipe in the bored hole, placement of concrete slurry, the LWSP, gravel backfill, and a concrete slurry cap. LWSPs will require a permanent impact area with an approximately 10-foot radius (314 square feet [$ft^2$]), and a temporary work area surrounding each pole with an approximately 150-foot by 75-foot area (11,250 $ft^2$).

TSPs would be installed atop a 6-foot diameter by approximately 60 foot deep cylindrical concrete footing. The hole would be drilled using truck or track-mounted excavators. Following excavation of the foundation footings, steel-reinforced cages would be set and concrete would be poured. Foundations in soft or loose soil, or that extend below the groundwater level, may be stabilized with drilling mud slurry. In this instance, mud slurry would be placed in the hole after drilling to prevent the sidewalls from sloughing. Concrete would then be pumped to the bottom of the hole, displacing the mud slurry. Depending on site conditions, the mud slurry brought to the surface would typically be collected in a pit adjacent to the foundation or vacuumed into a truck, and then pumped out to be reused or discarded at an appropriate off-site disposal facility. The concrete foundation may extend up to 4 feet above the natural ground surface. Excess bore spoils would be distributed at each pole site or used as backfill to fill holes left after removal of nearby wooden distribution poles. TSPs will require a permanent impact area with an approximately 25-foot radius (1,964 $ft^2$), and a temporary work area surrounding each pole with an approximately 200-foot by 150-foot area (30,000 $ft^2$). As mentioned previously, these permanent radii may be reduced in biologically sensitive areas.

Pole anchors will be placed at several locations along the ROW but would require minimal disturbance to the project site. Anchor placement includes driving a steel screw into the ground to a depth of approximately 5 feet and attachment of a steel cable to the pole to allow for extra support.

Pole spacing (spanning) was determined per CPUC standards, by ground clearance, overhead clearance, wind loading, distance between angle points, and environmental constraints. In general, span lengths range from 80 to approximately 700 feet to minimize impacts to jurisdictional waters and future conservation land. Proposed spacing (spanning) and pole placement are illustrated in Appendix A1 of the BTR.

#### 1.2.2.2 Cable Pulling and Stringing Setup

Cable pulling includes all activities associated with installing conductors onto the LWSPs and TSPs. Stringing locations are areas of surface disturbance for installing the line. The dimensions of the area needed for stringing set-ups varies depending upon the terrain. However, in order to provide a safe operating area for construction equipment, the length of the stringing setup areas would range from 200 feet to 500 feet and the width of these setup areas would range from 34 feet to 112 feet.

Stringing setup requires level areas to allow for maneuvering of the equipment, and when possible, these locations would be located on existing roads and level areas to minimize the need for grading and cleanup. If necessary, SCE would grade the stringing setup areas; however, SCE selected stringing setup areas that would need minimal grading, if any. The land would be restored to its previous condition following the completion of pulling and splicing activities. Stringing locations would be determined during construction and would be placed outside of sensitive areas. Generally, stringing locations would be in line with the overhead conductors, at a distance approximately three times the height of the pole.

#### 1.2.2.3 Underground Subtransmission

An approximately 300-foot portion of Segment 1, located approximately 0.5 mile west of Valley Substation, would be installed in new underground duct banks. Two riser poles and two subtransmission vaults would be installed along this portion of Segment 1 (Map 3 in Appendix A1 of the BTR). An approximately 20- to 24-inch-wide by 60-inch-deep trench would be required to place the 115 kV subtransmission line underground. This depth is required to meet the minimum 36 inches of cover above the duct bank. The trench for underground construction would be widened and shored where appropriate to meet California Occupation and Safety Health Administration requirements.

##### *Duct Bank Installation*

As trenching for the underground 115 kV subtransmission line is completed, SCE would begin to install the underground duct bank. Collectively, the duct bank is comprised of cable conduit, spacers, ground wire, and concrete encasement. The duct bank typically consists of six approximately 6-inch-diameter polyvinyl chloride (PVC) conduits fully encased with a minimum

of 3 inches of concrete all around. Typical 115 kV subtransmission duct bank installations would accommodate six cables. As currently designed, SCE would utilize three cable conduits and leave three spare cable conduits for any potential future circuit pursuant to SCE's current standards for 115 kV underground construction.

The majority of the duct banks would be installed in a vertically stacked configuration and each duct bank would be approximately 21 inches high by 20 inches wide. In areas where underground utilities are highly congested, or in areas where it is necessary to fan out the conduits to reach termination structures, a flat configuration duct bank may be required. However, it is not anticipated that a flat underground duct bank configuration would be required for this Project.

Once the duct bank has been installed, the trench would be backfilled with a two-sack sand slurry mix. Excavated materials would be disposed of at an off-site disposal facility in accordance with all applicable laws.

### *Vault Installation*

Vaults are below-grade concrete enclosures where the duct banks terminate. The vaults are constructed of prefabricated steel-reinforced concrete and designed to withstand heavy truck traffic loading. The inside dimensions of the underground vaults would be approximately 10 feet wide by 20 feet long with an inside height of 9.5 feet. The vaults would be placed along the underground portion of the subtransmission source line. Initially, the vaults would be used as pulling locations to pull cable through the conduits. After the cable is installed, the vaults would be utilized to splice the cables together. During operation, the vaults would provide access to the underground cables for maintenance, inspections, and repairs.

Once the vault is set, grade rings and the vault casting would be added and set to match the existing grade. The excavated area would be backfilled with a sand slurry mix to a point just below the top of the vault roof. Excavated materials, if suitable, would be used to backfill the remainder of the excavation, and any excess spoils would be disposed of at an off-site disposal facility in accordance with all applicable laws. The excavated area would be restored as necessary.

### *Riser Pole Construction*

At each end of an underground segment, the cables would rise out of the ground at riser poles, which accommodate the transition from underground to overhead subtransmission lines. Riser poles would consist of engineered TSP structures. The riser pole would support cable terminations, lightning arresters, and dead-end hardware for overhead conductors.

### *Conductors*

The proposed subtransmission line would require the installation of a 336.4 aluminum conductor steel reinforced fault return conductor. A clamp attachment would bond the fault return conductor directly to the LWSPs.

### *Underground Cable Pulling, Splicing and Termination*

Following vault and duct bank installation, SCE would pull the electrical cables through the duct banks, splice the cable segments at each vault, and terminate cables at the riser poles where the subtransmission line would transition from underground to overhead. To pull the cables through the duct banks, a cable reel would be placed at one end of the conduit segment, and a pulling rig would be placed at the opposite end. The cable from the cable reel would be attached to a rope in the duct bank, and the rope linked to the pulling rig, which would pull the rope and the attached cable through the duct banks. A lubricant would be applied as the cable enters the ducts to decrease friction and facilitate travel through the PVC conduits. The electrical cables for the 115 kV subtransmission line circuit would be pulled through the individual conduits in the duct bank at a rate of two to three segments between vaults per day.

After cable pulling is completed, the electrical cables would be spliced together. A splice crew would conduct splicing operations at each vault location and continue until all splicing is completed.

## 1.2.2.5 Telecommunication System

### *Underground Installation*

SCE is proposing to install fiber optic cable underground and attach the overhead portions of the fiber optic cable to the poles via a wood crossarm. Typical stringing setup areas would be approximately 60 feet by 20 feet. Stringing setup for the telecommunications system would require level areas to allow for maneuvering of the equipment, and when possible, these locations would be located on existing roads to minimize the need for grading and cleanup. If necessary, SCE would grade the stringing setup areas; however, SCE has selected areas that would need minimal grading, if any. The land would be restored to its previous condition following the completion of pulling and splicing activities. Proposed underground telecommunication facilities will be installed along Segments 1, 2, and 3 as follows; these areas are identified in Appendix A1 of the BTR:

***Segment 1***

Approximately 2,531 feet of fiber optic cable would be installed in an existing underground conduit within Valley Substation, and approximately 314 feet of fiber optic cable would be installed in a new underground conduit directly adjacent to Valley Substation. In addition, approximately 1,131 feet of fiber optic cable would be installed in a new underground conduit, approximately 2,200 feet west of Valley Substation.

***Segment 2***

In order to cross under the Serrano-Valley 500 kV Transmission Line, approximately 410 feet of fiber optic cable would be installed in a new underground conduit along SR-74 from Ethanac Road to Festus Circle.

***Segment 3***

In order to maintain diversity, approximately 338 feet of fiber optic cable would be installed in a new underground conduit along Third Street and across Collier Avenue.

***Overhead Installation***

SCE is proposing to install approximately 19.9 miles of fiber optic cable (both Phase 1 and Phase 2 projects) on wood crossarms attached to the poles between Valley Substation and Ivyglen Substation. The wood crossarms would be approximately 5 or 10 feet by 5 inches by 4 inches and installed on the poles where the fiber optic cable is not installed underground. SCE would utilize 5 or 10-foot wood crossarms and high-strength engineered dielectric suspension support blocks to attach the fiber optic cable to the new LWSPs. The suspension support blocks would be oriented vertically and attached to the crossarm. The crossarm would be attached to the pole prior to attaching the cable.

As described previously, SCE is proposing to add stringing setup areas for the installation of the telecommunications system. Typical stringing setup areas would be approximately 60 feet by 20 feet, and when possible, these locations would be located on existing roads and level areas to minimize the need for grading and cleanup. If necessary, SCE would grade the stringing setup areas; and these areas would be restored to their previous condition following the completion of pulling and splicing activities.

### 1.2.2.6 Roads

Two types of roads, access and spur, would be required for construction and maintenance of the proposed subtransmission line. Access roads originating from the main transport route would run along a portion of the proposed subtransmission line route between pole sites. Where needed, spur roads would lead from access roads and dead-end at one or more pole sites. Each pole site would require an access or spur road for construction. Some access and spur roads will remain for operation and maintenance.

Road construction/improvements will involve grading dirt roadways to allow access to pole locations, which includes a minimal drivable width to meet safety requirements. This would typically include width range of 14 feet (in areas with flat topography) to 22 feet in areas where a steeper grade requires wider roads, and an additional 2 feet of shoulder on each side. Drainage structures would be installed to allow for construction traffic usage as well as to prevent road damage and erosion due to uncontrolled water flow. Drainage structures may include “wet crossings” (un-culverted drainages crossing existing roads) or pipe culverts, depending upon the size and shape of existing drainages. Seven locations require gabions to control erosion where existing or new access roads cross ephemeral drainages. Two pipe culverts will be constructed at larger drainage crossings.

In sensitive areas, such as within the San Jacinto River floodplain, roads will be temporary and constructed at the existing grade, with no berms, so as not to disrupt hydrology in these areas. These roads will be restored to pre-construction conditions upon project completion.

### 1.2.2.7 Staging Areas

A staging area is a physical location where materials and equipment are temporarily stored during construction. Staging areas for the subtransmission line would be located at three locations along the alignment: Valley Yard-South, Joe 74, and Joe Yard Extension. Although the Valley Yard-North area was included in the PMR, the yard is not proposed for use, as currently designed. If the need for this yard occurs, biological survey results for this area will be provided by a separate consultant as a separate submittal.

The Valley Yard-South staging area is located south of Valley Substation in the northwest corner of the intersection of Case Road and Menifee Road. The Joe 74 staging area would be located southeast of the intersection of SR-74 and Ethanac Road. The Joe Yard Extension staging area is located immediately west of the Joe 74 staging area. These proposed staging yards are identified in Appendix A1 of the BTR.

Preparation of the staging areas would include temporary perimeter fencing and the application of gravel or crushed rock. Land that may be disturbed at the staging areas would be restored to pre-construction conditions or to the landowner's requirements following the completion of construction. Impacts to sensitive biological resources will be avoided to the extent possible by flagging or fencing off those resources and adjusting the temporary work areas around them.

### 1.2.2.8 Construction Equipment

Equipment needed for pole installation and related work includes one bull dozer, one motor grader, one dump truck, one concrete mixer truck, one compressor trailer, one auger drilling rig, two backhoes, one 30-ton crane, one conductor tensioner, one bull wheel puller, one sock line puller, one wire truck, two truck monitored cranes, water truck, two bucket trucks, two light trucks, one extrendable flatbed pole truck, one fuel truck, and possible helicopter use. Road construction would require the use of D6 and D8 front loaders, one dozer truck, one motor grader, one water truck, one drum compactor, one excavator, and two to three crew vehicles.

### 1.2.2.9 Helicopter Use

Helicopters would be used to support construction activities in areas where access is limited (e.g., no suitable access road, limited construction area to facilitate on-site structure assembly, and/or environmental constraints to access the work areas with standard construction vehicles and equipment). Helicopter usage would be based on environmental, topographic, or schedule constraints. Helicopter activities could include transportation of construction workers, delivery of equipment and materials to structure sites, hardware installation, and conductor stringing operations. Helicopters could be used in other areas to facilitate construction, dependent upon recommendations by the installation contractor.

The helicopters' operation area would include the following:

- helicopter operation yards,
- staging areas, and
- ground locations in close proximity to stringing setup areas, including locations in previously disturbed areas near construction sites.

In addition, helicopters may need to land within SCE ROWs, which could include landing on access or spur roads. For safety and security reasons, it is also assumed that helicopters and their associated support vehicles and equipment may be based at a local airport or SCE facility at night or on off-days.

### 1.2.2.10 Blasting/Fracturing

During site preparation and excavation/foundation work activities, blasting or fracturing may be required in some locations where rock is present. Prior to blasting, distances to any receptors in the area would be assessed to ensure that the blast would be engineered to be safe and effective. Pre-blast coordination and/or notification would be made to residents, utilities, and others potentially affected by blasting operations. Once coordination and notifications are complete, holes would be drilled and the explosive charges loaded into the holes. Special protective measures (e.g., gravel or blast mats and straw wattles) would be installed to control rock debris from the blast site. The area would be secured to avoid inadvertent entry by the public or other personnel. After the area is secured, the appropriate pre-blast warning signals would be given and the blast detonated. After detonation, a post-blast safety inspection would be conducted to ensure that the blast completely discharged and personnel may safely enter to excavate the blasted material. All blasting would be in accordance with applicable laws and regulatory requirements.

### 1.2.2.11 Valley Substation Improvements

The construction of the proposed subtransmission line would require the installation of new 115 kV switching and protective equipment at the Valley Substation. Improvements to the Valley Substation would include installing the components listed below within the existing perimeter fencing:

- An A-frame type line dead-end structure 30 feet wide by 29 feet high at a vacant position in the 115 kV open switchrack area for terminating the proposed subtransmission line.
- Two 115 kV, 2000 Ampere (continuous), 40 kilo-Ampere (short circuit) rated circuit breakers on concrete foundations and four 115 kV, 2000 Ampere (continuous) rated horizontal mounted, center side break disconnecting switches on steel support structures, for circuit breaker isolation.
- Subtransmission line and substation equipment protection within the existing control and relay building.

### 1.2.3 Operation and Maintenance

Operation and maintenance (O&M) activities would include all requirements set forth by California Independent System Operator and CPUC General Orders including activities that would control normal operations of the proposed subtransmission line remotely through internal systems. Annual inspections (at least one time per year) would be conducted by flying line routes or driving motor vehicle routes.

Maintenance would be applied on an as-needed basis. O&M activities are described in detail in Section 1.2.3 of the BTR, and include repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing poles, tree trimming, brush and weed control, and access road maintenance. As future oversight, SCE has a separate internal process involving their Corporate Environmental Health and Safety department to ensure no additional biological impacts result from O&M activities. This process includes pre-activity biological surveys, monitoring, and additional mitigation as required.

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## 2.0 AVOIDANCE FEASIBILITY

The proposed Project area occurs primarily within undeveloped lands or along existing roadways within Lake Elsinore and Perris. It contains a combination of agricultural, municipal, private, and reserve land, most with previous disturbance. Subtransmission lines and poles will be placed in an existing SCE ROW where available, and in several new small areas where easements have been obtained from willing landowners in already developed areas.

The Project area passes through disjunct Criteria Areas/Cells in two MSHCP area plans: Mead Valley and Elsinore. Further, the Project is located within the MSHCP Burrowing Owl Survey Area, Criteria Area Species Survey Area, and Narrow Endemic Plant Species Survey Area. Based on biological resource assessments, the Riverside County Integrated Project Conservation Report Generator, and maps of MSHCP survey areas, it was determined that the following studies would be required for the Project's consistency with the MSHCP:

- Focused plant surveys including MSHCP Narrow Endemic Plant Species and MSHCP Criteria Area Plant Species in their respective survey areas;
- Focused surveys for Riverside fairy shrimp (*Streptocephalus woottoni*) and vernal pool fairy shrimp (*Branchinecta lynchi*);
- Focused surveys for the burrowing owl (*Athene cunicularia*);
- Focused surveys for the least Bell's vireo (*Vireo bellii pusillus*) and southwestern willow flycatcher (*Empidonax traillii extimus*);
- A delineation of jurisdictional waters/wetlands including MSHCP *Riparian/Riverine* and *Vernal Pool* habitats.

Numerous biological surveys have been conducted for the Project by qualified biologists between 2006 and 2014 and are described in the BTR (AMEC 2014). SCE has utilized these data for design purposes and the Project was designed to avoid sensitive resources to the greatest extent possible. During the last few years, the project has gone through multiple re-design iterations resulting in the movement of poles and roads and/or reduction in the number of the smaller new easements within already developed areas. Although the MSHCP recommends avoidance of *Riparian/Riverine* resources in the Plan area, this is not entirely feasible for the proposed Project due to several design constraints. As such, some minimal temporary and permanent impacts to *Riparian/Riverine* resources will result from Project construction.

The following alternatives were evaluated during the conceptual phase of the project:

- No Action – site would remain undeveloped;
- Complete Avoidance (100 Percent Avoidance) – all impacts to drainages and sensitive species habitat would be avoided;

- Minimization/Mitigation of Direct and Indirect Impacts – impacts to sensitive species and drainages avoided where practicable, minimized where unavoidable, and mitigated where impacted.

Ultimately, minimization of direct and indirect impacts was selected as the preferred project alternative in accordance with MSHCP *Section 6.1.2*. The Complete Avoidance alternative of these *Riparian/Riverine* areas has been deemed infeasible due to the requirements of the project (ROW restrictions and pole spanning requirements). No feasible alternatives or project design exists that would completely avoid impacts to the *Riparian/Riverine* areas that would allow sufficient development acreage/lands to support the public utility improvements that are necessary for the region.

# 3.0 EXISTING BIOLOGICAL RESOURCES

Numerous biological surveys have been conducted for the proposed Project by qualified biologists familiar with the natural resources present or potentially present within the Project area (AMEC 2014). All *Riparian/Riverine* and *Vernal Pool* resources were delineated per federal, state, and MSCHP requirements and mapped accordingly. Surveys were conducted within all suitable *Riparian/Riverine* and *Vernal Pool* habitat areas of the Project for species presented in *Section 6.1.2* of the MSHCP that have potential to occur within the Project area, including:

- Focused plant surveys
- least Bell's vireo
- southwestern willow flycatcher
- western yellow-billed cuckoo
- Riverside fairy shrimp
- Santa Rosa Plateau fairy shrimp
- vernal pool fairy shrimp

Biological information and analysis presented in this DBESP was gathered from general and focused biological surveys that have been conducted to date and a review of available electronic databases, reports, and other sources. Table 2 identifies all field surveys conducted within the Project area between 2006 and 2013. Refer to the BTR (AMEC 2014) for detailed methods and results of surveys.

**Table 2.**
**Survey Locations, Personnel, Dates, and Purpose**

| Surveyor(s) | Date(s) | Purpose | Phase I Segment* | Survey Buffer on each side of Centerline (ft) |
|---|---|---|---|---|
| **2006** | | | | |
| PM, NM, CM | 25-27 April, 2-3 May | General Biological Survey (Plant and Wildlife Habitat Assessments) | *Preferred Route and Alternative Routes: E-2, C-2, C-5, C-7 | 100 |
| **2007** | | | | |
| CM, JG, SM | 18 April; 3, 14, 24 May; 5, 22 June; 3, 17 July | Focused Riparian Bird Surveys | *Suitable riparian habitat along Preferred Route (E-1 and C-1): | 500 |
| CM, DL, JG, MA[2], MW, NM, SM | 3, 15 May; 11, 13-14 June;<br>10-11, 13, 16, 30-31 July;<br>1-2 August | Focused Burrowing Owl Surveys | *Preferred Route (E-1 and C-1) | 500 |
| NM | 29 and 30 August | General Habitat Assessment | *Route updates along C-8 and C-9 | 500 |
| **2008** | | | | |
| JG, NM | 16-17, 21-24 April; 23 June | Focused Rare Plant Surveys | Preferred Route (E-1 and C-1) | 100 |
| JG | 5 June | MSHCP Habitat Assessment | C-9a, C-9b, C-9c, C-9d, C-9e | 500 |
| DK, JJ | 4 August | Vegetation Mapping | C-9a, C-9b, C-9c, C-9d, C-9e | 500 |
| JG | 9 October | Site Tour with SCE, Jurisdictional Issues | Preferred Route | 500 |
| JG, NR | 7 November | Jurisdictional Waters Assessment at San Jacinto River | Preferred Route | 500 |

**Table 2.**
**Survey Locations, Personnel, Dates, and Purpose (Cont.)**

| Surveyor(s) | Date(s) | Purpose | Phase I Segment* | Survey Buffer on each side of Centerline (ft) |
|---|---|---|---|---|
| JG | 1 December | Fairy Shrimp Habitat Assessment | C-9a, C-9b, C-9c, C-9d, C-9e | 500 |
| DK | 9 December | Various Assessments, Vegetation Mapping | C-9a, C-9b, C-9c, C-9d, C-9e | 500 |
| **2009** | | | | |
| JG, DK | 6 January | Fairy Shrimp Habitat and Drainage Mapping | C-9a, C-9b, C-9c, C-9d, C-9e | 500 |
| JG, NS | 9, 12, 27 January (2009); 10, 23-25 February; 9-10, 23 March; 6, 22 April;4, 18 May | Focused Fairy Shrimp Surveys (2008/2009 Wet-season) | Preferred Route and Alternatives: C-2, C-4, C-6, C-8b, C-8c, C-8d, C-9a, C-9b,C-9c, C-9d, C-9e | 500 |
| JG, NS | 6 Apr, 13 Jul | Focused Rare Plant Surveys | C-9a, C-9c, C-9d, C-9e | 100 |
| CM, JG, SM | 28 April; 15, 26 May; 5, 16, 27 June; 7, 17, 28 July | Focused Riparian Bird Surveys | Within suitable riparian habitat located along Preferred Route | 500 |
| AR, CM, JG, JT, MT, NM, VM | 31 July; 3, 6-7, 10, 12, 24, 18-21, 24-26 August | Focused Burrowing Owl Surveys | Preferred Route Alternatives C-2, C-4, C-6, C-8b, C-8c, C-8d, C-9a, C-9b, C-9c, C-9d, C-9e | 500 |
| NR | 3-4 June | Jurisdictional Waters Delineation | Preferred Route and Alternatives: C-2, C-4, C-6, C-8b, C-8c, C-8d, C-9a, C-9b, C-9c, C-9d, C-9e | 500 |

**Table 2.**
**Survey Locations, Personnel, Dates, and Purpose (Cont.)**

| Surveyor(s) | Date(s) | Purpose | Phase I Segment* | Survey Buffer on each side of Centerline (ft) |
|---|---|---|---|---|
| **2010** | | | | |
| NR | 3 March | Jurisdictional Waters Delineation at San Jacinto River | Preferred Route | 500 |
| NS, JG, MA[1] | 4, 14, 28, 29 December (2009), 11,25 January (2010); 8, 9, 11, 23, 24 February; 9, 10, 23 March; 4, 18, 21 April; 1, 16 May | Focused Fairy Shrimp Surveys (2009/2010 wet-season) | Segments 1-3 | 500 |
| **2011** | | | | |
| NR | 7 January | Jurisdictional Waters Delineation | Various riparian/wetland locations along Segments 1-3 | 500 |
| CM, SM, JG | 12-14 December 1,3,4,9,11,15,16,18,23 March | Focused SKR/ Burrow Surveys and Habitat Assessment | Segments 1-3 | 500 |
| CM, SM, MV, NM, JG | 31 March,1,4,6,22,26-28 April, | Focused Burrowing Owl Surveys | Segments 1-3 | 500 |
| AS, TS | 22, 23, 28-30 March; 29 April, 15-18 July | Focused Rare Plant Surveys | Segments 1-3 | 100 |
| CM, JG, SM | 13 April; 6, 17, 24 May; 6, 17, 28 June; 14, 20 July | Focused Riparian Bird Surveys | Within suitable riparian habitat located along Segments 1-3 | 500 |
| **2012** | | | | |
| AS, JG | 21, 22, 26 March, 27 April, 1 27 May, 1, 25 June | Focused Rare Plant Surveys | Segments 1-3 | 100 |
| DE,CV, LL, RA, JK, JP, LP, JR, LB | 9,10,19,20,23, 24 April; 1,5,11,12,15 May; 1,4,5,8,22,25,28,29 June; 2,12, 20, 23 July | Focused Burrowing Owl Surveys | Segments 1-3 | 500 |

**Table 2.**
**Survey Locations, Personnel, Dates, and Purpose (Cont.)**

| Surveyor(s) | Date(s) | Purpose | Phase I Segment* | Survey Buffer on each side of Centerline (ft) |
|---|---|---|---|---|
| NS, JG, MA[1] | 25 January (2012); 8, 22 February; 8, 21 March; 3-4, 17 April, 2, 16, 27 May | Focused Fairy Shrimp Surveys (2011/2012 wet-season) | Segments 1-3 | 500 |
| CM, JG, SM | 10, 20 April, 3, 15 May; 4, 14, 28 June; 9 July | Focused Riparian Bird Surveys | Within suitable riparian habitat located along Segments 1-3 | 500 |
| PV | 20-31 May | Focused Stephens' Kangaroo Rat Surveys | Segments 1-3 | 500 |
| **2013** | | | | |
| NR | 9 March; 23 May | Jurisdictional Waters Delineation | Segments 1-3 | 500 |
| AS, TC | 27-29 March, 4, 16, 17 April | Focused Rare Plant Surveys | Segments 1-3 | 100 |
| NS,DP | 12-15, 18, 28 March; 2,3,21,22 May | Focused Burrowing Owls Surveys | Segments 1-3 | 500 |
| JG, TC | 27 December (2012), 9, 23, 29, January (2013); 12, 26 February; 12, 26 March, 9 April | Focused Fairy Shrimp Surveys (2012/2013 wet-season) | New Staging Yards along Segments 1-3 | 500 |
| JG, SM | 16, 22, April, 3, 15, 20 May | Focused Riparian Bird Surveys | Within suitable riparian habitat located along Segments 1-3 | 500 |
| **2014** | | | | |
| JG, TC, NS | 6 , 20 December (2013), 3, 17 January (2014); 7, 21 February; 3, 11, 25, 27 March, 3, 11 April | Focused Fairy Shrimp Surveys (2013/2014 wet-season) | New Staging Yards along Segments 1-3 | 500 |

Notes:
*Phase 1 Proposed (current) Project approved in Final EIR:
Segment 1 = E-1
Segment 2 = C-1
Segment 3 = C-9a and C-9c

(Historical preferred route included C-2, C-3, C-4 and C-6)

| | |
|---|---|
| AR | Aaron Roarick, AMEC Biologist |
| AS | Andrew Sanders, UCR Botanist |
| CM | Chet McGaugh, AMEC Biologist |
| CV | Corey Vane, Chambers Group Wildlife Biologist |
| DE | Damien Edwards, Chambers Group Wildlife Biologist |
| DK | David King, AMEC Biologist |
| DL | David Lee, AMEC Biologist |
| DP | Daniel Palmert, Pangea Biologist |
| JG | John Green, AMEC Biologist |
| JJ | Julie Janssen, AMEC Biologist |
| JP | John Parent, Chambers Group Wildlife Biologist |
| JK | John Kanlund, Chambers Group Wildlife Biologist |
| JR | Jennifer Russell, Chambers Group Wildlife Biologist |
| JT | Jennifer Tobin, AMEC Biologist |
| LB | Lorena Bernal, Chambers Group Wildlife Biologist |
| LL | Linette Lina, Chambers Group Wildlife Biologist |
| LP | Lisa Perez, Chambers Group Wildlife Biologist |
| MA[1] | Morgan Aagesen, AMEC GIS Coordinator |
| MA[2] | Matt Amalong, AMEC Biologist |
| MW | Michael Wilcox, AMEC Biologist |
| MT | Michelle Tobin, AMEC Biologist |
| NM | Nathan Moorhatch, AMEC Biologist |
| NR | Nick Ricono, AMEC Biologist |
| NS | Nicole Kimball, AMEC and KMEA Biologist |
| PM | Patrick McConnell, AMEC Botanist |
| PV | Phillipe Vergne, Contracted Wildlife Biologist |
| RA | Rebecca Alvidrez, Chambers Group Wildlife Biologist |
| SM | Stephen Myers, AMEC Biologist |
| TC | Tim Chumley, AMEC Botanist |
| TM | Tsegaye Mengistu, AMEC Biologist |
| VM | Vesta Myers, AMEC Biologist |

## 3.1 Climate

The study area is located within a Mediterranean climate region consisting of warm, dry summers and mild, wet winters. In summer, temperatures often reach 100 degrees Fahrenheit (º F) and winter temperatures fall into the 30s, with an occasional freeze. Average annual temperature ranges are fairly moderate for the area, ranging from 49.3º F to 79.5º F.

The Elsinore, California Station (No. 042805) is the closest weather station to the project site with reliable monthly rainfall totals for the duration of the project (i.e., no missing days during this period). Rain season (September through May) precipitation data for the duration of biological studies are provided in Table 3. Average total precipitation for the area is approximately 12.01 inches per year (Western Regional Climate Center [WRCC] 2014). As indicated in Table 3, the 2009/2010 and 2010/2011 rainy seasons experienced the greatest total precipitation levels during the survey period (WRCC 2014; Table 3).

**Table 3.**
**Monthly Precipitation (Inches)**

| Rain Season | Sept | Oct | Nov | Dec | Jan | Feb | Mar | April | May | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 2005/2006 | 1.65 | 0.22 | 0 | - | 0 | 3.03 | 2.42 | 2.86 | 0 | 10.18 |
| 2006/2007 | 0 | 0 | 0 | 0.07 | 0.01 | 0.02 | 0.02 | 0.32 | 0 | 0.44 |
| 2007/2008 | 0.04 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0.88 | 0.92 |
| 2008/2009 | 0 | 0 | 0.34 | 4.05 | 0.18 | 3.97 | 0.13 | 0.05 | 0 | 8.72 |
| 2009/2010 | 0 | 0.22 | 0.07 | 3.76 | 8.88 | 1.81 | 0.44 | 1.23 | 0.13 | 16.54 |
| 2010/2011 | 0 | 1.61 | 1.06 | 11.67 | 0.7 | 3.07 | 2.96 | 0.46 | 0.78 | 22.31 |
| 2011/2012 | 0.03 | 0.44 | 1.37 | 0.74 | 0.55 | 0.67 | 1.51 | 1.18 | 0 | 6.49 |
| 2012/2013 | 0.24 | 0.36 | 0.30 | 1.78 | 0.91 | 0.46 | 0.46 | 0.5 | 0 | 4.51 |
| 2013/2014 | 0 | 0.16 | 0.53 | 0.70 | 0.13 | 1.28 | 1.27 | 0.50 | 0 | 4.57 |

## 3.2 Topography

The Project study area is located on predominantly flat terrain used for grazing, agriculture, and rural residential development. The proposed ROW traverses the relatively flat Perris Valley in the east, before crossing the San Jacinto River west across a series of low, gently rolling hills and/or rocky areas. The route travels southwest along SR-74 through residential and commercial areas to Interstate 15 in Lake Elsinore. Much of the proposed alignment is adjacent to existing paved and dirt roads, transmission line ROWs, and access roads.

## 3.3 Hydrology

Western Riverside County is dominated by ephemeral washes that flow south and west out of the hills toward the San Jacinto River and Lake Elsinore. The Project area traverses multiple drainages within the San Jacinto Watershed (USGS Hydrologic Unit Code 18070202). This watershed includes the Perris Valley-San Jacinto River, Railroad Canyon Reservoir-San Jacinto River, and Arroyo Del Toro-Temescal Wash sub-watersheds.

The majority of warterways in the project area are minor ephemeral drainages containing water for short periods of time during large storm events. Larger waterways, including the San Jacinto River and an unnamed tributary west of the San Jacinto River near Keystone Drive, may be identified as seasonal waterways, containing water for longer periods on a seasonal basis, but not perennially throughout their entire reaches.

## 3.4 Soils

Soils in the Project area are primarily composed the Monserate-Arlington-Exeter, Friant-Lodo-Escondido, Hanford-Tujunga-Greenfield, Cajalco-Temescal-Las Posas, and Traver-Domino-Willows associations. These soils are characterized as level to moderately steep soils that have a surface layer of sandy loam often with a hardpan and can vary from very shallow to relatively deep (U.S. Department of Agriculture [USDA] 1971). The soils in the area do not generally have a high clay component. However, there are “lenses” of clay soils in the study area. The Monserate-Arlington-Exeter associations occupy old alluvial fans and terraces. The soils of the Traver-Domino-Willows association are in basins and valley fills and on floodplains (USDA 1971).

## 3.5 Flora

### 3.5.1 Vegetation Communities

The vegetation communities within the study area are primarily grasslands, Riversidean sage scrub, and developed disturbed land (ruderal habitat). Previous and current agriculture, grazing, fire suppression, and invasion of nonnative plant species have contributed to the disturbed condition of many vegetation communities within the study area. Appendix D1 of the BTR (AMEC 2014) lists all floral species observed within the entire Project area during the 8 years of field surveys (2006-2013).

Vegetation communities were mapped in general accordance with the nomenclature and definitions in the MSHCP, which is based on the vegetation communities presented in the *Preliminary Descriptions of Terrestrial Natural Communities of California* (Holland 1986). Vegetation communities were also compared to the MSHCP’s vegetation community layers to the extent that a comparison could be made as they are considerably broader than the detailed mapping that was conducted for this Project.

Vegetation communities which were identified within the study area are illustrated in Appendix A1 of the BTR (AMEC 2014). Table 4 presents the acreage of each vegetation community present within the study area.

**Table 4.**
**Existing Vegetation Communities Present within the Study Area**

| Vegetation Community | Code | Acres |
|---|---|---|
| **Upland Communities** | | |
| Disturbed/Developed | DDL | 752.31 |
| Agriculture – Field/Croplands | AGFC | 94.25 |
| Nonnative Grassland | NNG | 334.41 |
| Disturbed Nonnative Grassland | DNNG | 122.67 |
| Riversidean Sage Scrub | RSS | 31.98 |
| Disturbed Riversidean Sage Scrub | DRSS | 256.34 |
| **Riparian/Riverine** | | |
| Cismontane Alkali Marsh | CAM | 1.07 |
| Mulefat Scrub | MFS | 0.37 |
| Riparian Scrub | RS | 2.23 |
| Southern Cottonwood/Willow Riparian Forest | SCWR | 2.09 |
| Southern Willow Scrub | SWS | 11.69 |
| | **TOTAL ACRES** | **1609.42** |

### 3.5.2 Sensitive Plants

Five sensitive plant species were detected within the Phase 1 study area during botanical field studies including: long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*), Parry's spineflower (*Chorizanthe parryi* var. *parryi)*, small-flowered morning-glory (*Convolvulus simulans*), paniculate tarplant (*Deinandra paniculata*), and small-flowered microseris (*Microseris douglasii* ssp. *platycarpha*). Two additional species have been documented (California Department of Fish and Wildlife [CDFW] California Natural Diversity Database [CNDDB] 2013) within the project vicinity, outside of the study area: Munz's onion (*Allium munzii*) and thread-leaved brodiaea (*Brodiaea filifolia*); however, these species were not identified during field studies conducted for the Project. A description of each identified species is provided below.

**Long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*)** is a California Native Plant Society (CNPS) list 1B.2 (rare, threatened, or endangered in California; fairly endangered in California) and MSHCP Group 2 annual herb in the knotweed family (Polygonaceae). For MSHCP Group 2 species, take coverage is warranted based on regional or landscape level considerations with the addition of site-specific conservation and management requirements that are clearly identified in the MSHCP for species that are generally well-distributed, but that

have core habitats that require conservation. Long-spine spineflower is Adequately Covered under the MSHCP (County of Riverside 2003); thus incidental take of this species would be permitted for the Project should PSE status be granted.

Potential habitat for long-spined spine flower is considered to be southern needlegrass grassland, and openings in coastal sage scrub and chaparral that occur on clay or rocky clay soils of the following series: Altamont, Auld, Bosanko, Claypit, and Porterville (County of Riverside 2003) at elevations ranging from 30 to 1530 meters. Long-spined spineflower blooms from April to July (CNPS 2013). A population of long-spined spineflower was identified east of SR-74, near Theda Street (Map 11 in Appendix A1 of the BTR)

**Parry's spineflower (*Chorizanthe parryi* var. *parryi)*** is a CNPS list 1B.1 and MSHCP Group 2 annual herb in the knotweed family. This species is an MSHCP Covered Species; however, is not Adequately Conserved, Parry's spineflower (*Chorizanthe parryi* var. *parryi*. As described in *Section 2.1.4* of the MSHCP, Parry's spineflower is one of the 28 Covered Species that will be considered to be Adequately Conserved when certain conservation requirements are met as identified in the species-specific conservation objectives for those species. Particular species-specific conservation objectives, which are identified in *Table 9-3* of the MSHCP, must be satisfied for Parry's spineflower to become an Adequately Conserved Covered Species.

Parry's spineflower is known to occur within chaparral, cismontane woodland, coastal scrub and grassland habitats at elevations ranging from 275 to 1,220 meters. Parry's spineflower blooms from April to June (CNPS 2013). Parry's spineflower was identified east of SR-74, near Theda Street (Map 11 in Appendix A1 of the BTR). A population has also been recorded within the CNDDB south of Corsica Lane within the study area (Map 6 in Appendix A1 of the BTR).

**Small-flowered morning-glory (*Convolvulus simulans*)** is a CNPS list 4.2 (limited distribution; fairly threatened in California) and MSHCP Group 2 annual herb in the morning glory family (Convolvulaceae). It is Adequately Conserved under the MSHCP (County of Riverside 2003); thus incidental take of this species would be permitted for the Project should PSE status be granted.

Small-flowered morning-glory is known to occur within clay or serpentine soils of chaparral, coastal scrub, or grassland habitats at elevations ranging from 30 to 700 meters. Small-flowered morning glory blooms from March to July (CNPS 2013). This species is an Adequately Conserved species by the MSCHP and is as a CNPS List 4.2 species. A population of small-flowered morning glory was identified east of Goetz Road (Map 6 and 7 in Appendix A1 of the BTR).

**Paniculate tarplant (*Deinandra paniculata*)** is a CNPS list 4.2 annual herb in the sunflower family. It is known to occur within coastal scrub, grasslands, and vernal pools at elevations ranging from 25 to 940 meters. Paniculate tarplant blooms from April to November. Paniculate tarplant is locally common within the study area; (Map 2,3,4,5,6,7,8,9,10,11, and 12 in Appendix A1 of the BTR). This species is not a Covered species under the MSHCP.

**Small-flowered microseris (*Microseris douglassii* spp. *platycarpha*)** is a CNPS list 4.2 and MSHCP Group 2 annual herb in the sunflower family (Asteraceae). It is associated with clay and cobbly clay soils in chaparral, coastal sage scrub and grasslands at elevations below 955 meters (CNPS 2013). . As described in *Section 2.1.4* of the MSHCP, small-flowered microseris is one of the 28 Covered Species that will be considered to be Adequately Conserved when certain conservation requirements are met as identified in the species-specific conservation objectives for those species. Particular species-specific conservation objectives, which are identified in *Table 9-3* of the MSHCP, must be satisfied for this species to become an Adequately Conserved Covered Species. Small-flowered microseris was identified east of Goetz Road within an area mapped as "disturbed and developed" and underlain by clay soils (Map 7 in Appendix A1 of the BTR).

The Project has been designed to avoid/minimize impacts to all plant species to the greatest extent possible. However, based on current design two (2) sensitive plant populations within the Project footprint will be impacted: long-spined spineflower and paniculate tarplant. As an adequately conserved species, no additional mitigation is necessary for anticipated impacts to long-spined spineflower pursuant to the MSHCP. Paniculate tarplant is not covered by the MSHCP. However, SCE will offset impacts to this species by implementing measures including, but not limited to, topsoil salvage and replacement of seedbank, and/or transplantation of individual plants.

### 3.5.3 Oak Trees

There are no oak trees on or adjacent to the current Project alignment.

## 3.6 Fauna

The study area supports a low-moderate diversity of wildlife species due to the high level of disturbance and development in the vicinity. Many of the wildlife species observed or detected in the study area (refer to Appendix D2 of the BTR) are commonly found in the urban interface or on disturbed habitat.

### 3.6.1 Sensitive Wildlife

#### 3.6.1.1 Adequately Conserved Species

Wildlife species that are Covered Species and Adequately Conserved by the MSHCP were detected within the study area during habitat assessment and focused surveys. These species include coastal California gnatcatcher, California coastal whiptail, orange-throated whiptail, San Diego black tailed jackrabbit, golden eagle, California horned lark, Cooper's hawk, white-tailed kite, northern harrier, yellow warbler, rufous-crowned sparrow, Swainson's hawk, and Bell's sage sparrow. As Adequately Covered species, participation in the MSHCP would provide "take" for these species and no additional mitigation would be required. Although these species are Adequately Covered, the intent of the Project is to avoid or minimize impacts to all sensitive biological resources that occur within its boundaries.

### 3.6.1.2 Stephens' Kangaroo Rat (*Dipodomys stephensi*)

Stephens' kangaroo rat (*Dipodomys stephensi*; SKR) is a federally endangered and state threatened species. The MSHCP does not provide incidental take for SKR when the project also lies within the SKR Habitat Conservation Plan (HCP) boundaries. SKR and associated burrows were identified within the Project study area (Maps 2,3,6,7,9,11,12,14,16,18,19 in Appendix A1 of the BTR). As of October 15, 2012, SCE finalized the SKR HCP Implementation Agreement with the Riverside County Habitat Conservation Agency (RCHCA). This Agreement provides a process through which SCE may obtain take authorization of SKR through the SKR HCP for SCE's VIG Project. The U.S. Fish and Wildlife Service (USFWS) and the CDFW provided a joint letter of support stating the RCHCA has the authority under the SKR HCP to enter into this Agreement and provide SKR take authorization to SCE. This take authorization is in accordance with the terms and conditions in the USFWS Management Authorization [or USFWS' Federal Permit], the SKR HCP, and the SKR HCP Implementation Agreement. To complete the SKR take authorization process prior to the start of construction, SCE will obtain a Certificate of Inclusion from the RCHCA specific to the VIG Project.

### 3.6.1.3 *Section 6.1.2* and *6.2.3* Criteria Area Species

Two species that were observed within or near the study area that are of particular concern for consistency with *Sections 6.1.2* and *6.2.3* of the MSHCP include burrowing owl (*Athene cunicularia*; BUOW) and least Bell's vireo (*Vireo bellii pusillus*; LBV). These species and their presence within the Project area are further described below.

#### Burrowing owl (*Athene cunicularia*)

BUOW is a federal and state species of special concern and MSHCP Group 3 species that is found in open, dry grasslands, agricultural and range lands, as well as desert habitats with low-growing vegetation. Several potential burrows were mapped within the Project area during habitat assessments for this species (refer to Appendix A1 of the BTR); however, focused surveys did not identify BUOW or active nests during 2007, 2009, 2011, 2012, or 2013 surveys within the study area. One BUOW was observed outside of the Project boundaries during a single visit in 2009 (Map 5 in Appendix A1 of the BTR). However, the BUOW was not present during any previous or subsequent visits. No active burrow could be confirmed for this bird, which was perched on dumped tires in the road over 500 feet north of the alignment. Even if resident in the area, this BUOW appears to use a burrow outside of the protocol 500 foot buffer. Additionally, two burrows were identified with fairly recent whitewash within the study area in 2011 (Map 8 in Appendix A1 of the BTR). However, during subsequent focused surveys, no BUOWs or owl activity were located near or at these burrows. No BUOW sign was observed in any other areas of the Project during the same 2011 survey year.

In April 2012, two adult BUOWs were observed near a known burrow complex location which was located approximately 300 feet west-northwest from the intersection of Evans Road and McLaughlin Road in Romoland (Map 5 in Appendix A1 of the BTR). During a subsequent visit in June, no fresh sign or BUOWs were observed. An irrigation line had been recently installed nearby and spray could reach the burrows based on splatter on the ground around and within the complex. The remains of what appeared to be a BUOW (wings, legs and feathers) were

observed just west of the burrow complex under a lattice tower. During the subsequent six (6) surveys of this area, no BUOWs were observed and the burrow complex was observed to be disturbed by agricultural activities. Although several potential suitable burrows were identified in the study area during 2013 surveys, no BUOWs were documented. One potential burrow was observed with owl sign (pellets) near the edge of the study area, adjacent to Sherman Road (Map 4 in Appendix A1 of the BTR).

### Least Bell's vireo (*Vireo bellii pusillus*)

LBV is a federally endangered, state endangered, and MSHCP Group 2 migratory member of the vireo family (Vireonidae). It is the western-most subspecies, breeding entirely within California and northern Baja California. LBV primarily occupies riverine riparian habitats that typically feature dense cover within 1-2 meters of the ground and a dense, stratified canopy. Typically it is associated with southern willow scrub, cottonwood forest, mule fat scrub, sycamore alluvial woodland, coast live oak riparian forest, arroyo willow riparian forest, wild blackberry, or mesquite in desert localities. Generally LBVs arrive from the Mexican wintering areas by end of March to early April, and depart by end of September (County of Riverside 2003).

Surveys for sensitive riparian birds, including LBV and southwestern willow flycatcher (SWFL), were conducted in suitable habitat in 2007, 2009, 2011, 2012, and 2013. No SWFL were detected at any of the survey areas. LBV territories were present in the tributary to the San Jacinto River near Keystone Drive during 2007 and 2009 survey years (Map 10 in Appendix A1 of the BTR). That area, and all areas where LBV were detected, were determined to be "occupied" and were removed from areas to be surveyed in subsequent years. The main body of the San Jacinto River traversed by the project alignment (Map 9 in Appendix A1 of the BTR) has not been identified as a designated LBV breeding territory but is a known travel corridor for LBV (Aimar, pers. comm., 2011); therefore in coordination with the Wildlife Agencies, LBV presence is assumed. During the 2013 surveys, a new occurrence of LBV was identified near Rosetta Canyon Drive and SR-74 (Map 17 in Appendix A1 of the BTR).

## 3.7 Riparian/Riverine Resources

The delineation of jurisdictional waters identified several drainages within the Project area that meet the definition of *Riparian/Riverine* per Section *6.1.2* of the MSHCP. Figures in Appendix A1 and A2 of the BTR illustrate these drainages within the Project area, occurring within the Perris Valley-San Jacinto River, Railroad Canyon Reservoir-San Jacinto River, and Arroyo Del Toro-Temescal Wash subwatersheds. MSHCP *Riparian* communities in the Project area include cismontane alkali marsh, mulefat scrub, riparian scrub, southern cottonwood/willow riparian forest and southern willow scrub habitats primarily associated with the San Jacinto River and its tributaries.

MSHCP *Riverine* areas, for this report, are defined as stream channels with fresh water flow during all or portions of the year. The majority of waterways in the Project area are small ephemeral drainages containing water for short periods of time during large storm events and are largely unvegetated. Larger waterways, including the San Jacinto River and an unnamed

tributary west of the San Jacinto River near Keystone Drive may be identified as seasonal waterways, containing water for longer periods of time on a seasonal basis, but not perennially.

The Project was designed to avoid *Riparian/Riverine* areas to the greatest extent possible; however, some temporary and permanent impacts will result from dirt road improvements and pole siting at several locations.

### 3.7.1 Hydrological and Biological Functions and Values

Most of the ephemeral drainages in the Project area are small, 1-4 feet in width, and only flow during, and for a short time after, storm events. Most of these channels are related to some level of disturbance and provide transfer between inlets and outlets of municipal stormwater systems. The flow volume is low based on minimal signs of scouring and sparse, ruderal vegetation growth within the majority of the channels. The hydrological function and value of these ephemeral drainages are primarily sediment retention and transport due to the brief time periods these ephemeral drainage hold water. However, drainages with sandy soils will allow for filtration and subsurface water transfer and retention.

The functions and values to wildlife within these ephemeral drainages is minimal due to the small volume and short length of time that water present. These drainages do not appear to provide habitat for special status species in the Project area.

In contrast, the larger waterways of the Project area, including the San Jacinto River and the unnamed tributary west of the San Jacinto River near Keystone Drive, may be identified as seasonal waterways, containing water for longer periods of time on a seasonal basis, but not perennially throughout their entire reach. The following functions are expected to be supported within these areas: nutrient cycling, sediment retention and transport, and pollutant trapping and filtration. These areas are expected to support improved water quality within the San Jacinto watershed.

In addition to the hydrological functions and values, these larger drainages support southern cottonwood/willow riparian forest, riparian scrub, and southern willow scrub riparian habitat and riparian-associated species. The MSHCP (*Section 6.1.2*) identifies specific species by which conservation and protection of *Riparian-Riverine* resources are to support. Of these species, LBV was the only species identified in the Project area during surveys from 2006-2013 (AMEC 2014).

Wildlife movement throughout the San Jacinto River and its tributaries is expected. Plant cover is high in most areas and during the majority of the year there are traversable areas that would not be inundated. Mammal sign was commonly found during field work and included coyote, bobcat, raccoon, opossum, striped skunk, and desert cottontail.

The Project was designed to avoid *Riparian/Riverine* areas to the greatest extent possible; however, some temporary and permanent impacts will result from road improvements and pole siting at several locations. Further discussion of these impacts and associated avoidance and minimization measures are provided in Section 4.0 of this report.

### 3.7.2 Vernal Pools and Fairy Shrimp

The delineation of jurisdictional waters identified several highly disturbed depressions along the Project alignment in existing roadways, fallow fields, and periodically disked areas that are largely unvegetated and do not meet the definition of *Vernal Pool* per Section *6.1.2* of the MSHCP. High quality *Vernal Pools* occur within the San Jacinto River floodplain that meet the definition per *Section 6.1.2* of the MSHCP. These *Vernal Pools* are primarily bare ground but contain vernal pool endemic plant species, including alkali weed (*Cressa truxillensis*) and annual hairgrass (*Deschampsia danthonioides*).

Hydrology of the *Vernal Pools* adjacent to the San Jacinto River is related to overflow from the river during high flow events. The overflow is collected in adjacent depressions and retained for several weeks to months during the rainy season. The Project was designed to avoid these *Vernal Pool*s, and there will be no permanent or temporary impacts to their functions or values as proposed impacts will not redirect or inhibit *Vernal Pool* hydrology.

Focused fairy shrimp surveys were conducted during the 2008/2009, 2009/2010, and 2011/2012 within 500-feet of the centerline of the entire Project ROW. Additional focused fairy shrimp surveys were conducted during 2012/2013 and 2013/2014 only at the new proposed staging yards along the Phase 1 alignment: Valley Yard-South, Joe 74, and Joe Yard Extension. The survey report is being prepared at the time of this submittal. Per USFWS wet-season guidelines (1996), all depressions that held water and had potential to support vernal pool endemic species were mapped during these surveys. Although the majority of inundated areas were not considered to meet the definition of a *Vernal Pool*, they do provide fairy shrimp habitat and were therefore surveyed. No protected fairy shrimp species were detected during surveys; however, the common versatile fairy shrimp (*Branchinecta lindahli*) was present in many pools and depressions. No sensitive vernal pool plants were identified during focused surveys of inundated areas. Detailed results of the wet-season surveys, including maps of the pooled areas that were the focus of surveys, are presented in Appendix E of the BTR (AMEC 2014).

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# 4.0 RIPARIAN/RIVERINE AND VERNAL POOL IMPACT ANALYSIS AND MITIGATION MEASURES

This section provides an analysis of impacts to *Riparian/Riverine* and *Vernal Pool* resources expected to occur from the construction of the proposed Project. Both direct and indirect impacts are anticipated as a result of construction activities. Impacts are defined as activities that destroy, damage, alter, or otherwise affect biological resources in a project area. Impacts are characterized as described below.

1. Direct impacts occur when biological resources are altered, disturbed, destroyed, or removed during the course of project implementation. Examples of direct impacts are loss of habitat as a result of grading or filling or "take" of a sensitive species.
2. Indirect impacts occur when project-related activities affect biological resources in a manner other than direct. Examples of indirect impacts include fragmentation, pollination interruption, increased environmental toxins, increased invasion and competition by nonnative animals and plants, increased noise, human activity, or light levels.
3. Permanent impacts result in the irreversible loss of biological resources. Examples include the permanent removal of vegetation or habitat through placement of a concrete foundation or a paved road.
4. Temporary impacts are reversible with the implementation of mitigation measures. Examples include short-term noise events associated with project operations or the revegetation of an area cleared during temporary construction activities.

## 4.1 Direct Impacts

Direct impacts would result from construction activities including pole installation, access road maintenance and creation, creation of temporary work areas, and underground cable installation. However, not all of these activities would necessarily impact riparian/riverine resources. Proposed subtransmission lines and poles will be placed in an existing SCE ROW where available, and in several new small areas where easements have been obtained from willing landowners in already developed areas. The Project was designed to avoid sensitive resources to the greatest extent possible. During the last few years, the project has gone through multiple re-design iterations resulting in the movement of poles and roads and/or reduction in the number of the smaller new easements within already developed areas. As such some temporary and permanent impacts will result from Project construction activities.

### 4.1.1 Construction Related Impacts

For a detailed description of construction activities, refer to Section 1.2 of this report. Approximately 318 poles would be installed, including 290 LWSPs and 28 TSPs. LWSPs will require a permanent impact area with an approximately 10-foot radius (314 square feet [$ft^2$]), and a temporary work area surrounding each pole with an approximately 150-foot by 75-foot area (11,250 $ft^2$). TSPs will require a permanent impact area with an approximately 25-foot radius (1,964 $ft^2$), and a temporary work area surrounding each pole with an approximately 200-foot by 150-foot area (30,000 $ft^2$). However, based on the sensitivity in some areas (e.g. San

Jacinto River area), these permanent radii may be reduced to approximately 5-10 feet in coordination with Riverside County Fire Department and CPUC.

Some pole sites would require an access or spur road for construction. Road construction/improvements will involve grading roadways to allow access to pole locations. In sensitive areas, such as the San Jacinto River floodplain, roads will be temporary and constructed at existing grade, with no berms, so as not to disrupt hydrology in these areas. These temporary roads will be restored to pre-construction conditions after project completion. Seven access road locations will require gabions to control erosion where existing or new access roads cross ephemeral drainages. Pipe culverts will be constructed at two of the larger drainage crossings. As discussed above, the Project was designed to avoid *Riparian/Riverine* areas by spanning those resources to the greatest extent possible; however, minimal temporary and permanent impacts would result from land disturbance activities during Project construction.

Permanent and temporary impacts to *Riparian/Riverine* resources resulting from grading operations, construction of drainage structures, pole siting, riparian tree trimming, etc. are described in Table 5 with impact numbers referenced in figures provided in Appendix A1 of the BTR with close-up views of *Riparian/Riverine* impact areas provided in Appendix A2 of the BTR.

**Table 5.**
**Summary of Impacts to Waters**

| Impact Number | Description of Activity | Habitat Type (MSHCP Designation) | Location (Lat/Long in Decimal Degrees) | Permanent (acres/linear feet) | Temporary (acres/linear feet) |
|---|---|---|---|---|---|
| **VIG1-1** | New road crossing ephemeral wash with gabion | Unvegetated Channel (Riverine) | 33.73655 -117.16181 | 0.010/50 | 0.004/20 |
| **VIG1-2** | New road crossing ephemeral wash with gabion | Unvegetated Channel (Riverine) | 33.73653 -117.16264 | 0.010/70 | 0.003/20 |
| **VIG1-3** | Existing road crossing ephemeral wash with gabion | Unvegetated Channel (Riverine) | 33.73678 -117.22390 | 0.012/30 | 0.008/10 |
| **VIG1-4** | Existing road crossing ephemeral wash with gabion | Unvegetated Channel (Riverine) | 33.73593 -117.22810 | 0.003/10 | 0.001/10 |
| | | Southern Willow Scrub wetland (Riparian) | 33.73593 -117.22810 | 0.003/20 | 0.004/10 |
| **VIG1-5** | Existing road crossing ephemeral wash with gabion | Unvegetated Channel (Riverine) | 33.73627 -117.23830 | 0.004/30 | 0.001/10 |
| **VIG1-6** | Existing road crossing ephemeral wash with gabion | Unvegetated Channel (Riverine) | 33.73659 -117.24366 | 0.003/30 | 0.002/20 |
| **VIG1-7** | New road and pole construction | Southern Willow Scrub (Riparian) | 33.73667 -117.24398 | 0.005/40 | 0.012/20 |
| **VIG1-8** | Riparian vegetation trimming for line clearance | Southern Willow Scrub riparian (Riparian) | 33.73673 -117.24453 | 0.123/350 | 0 |
| **VIG1-9** | Vegetation clearing for pole construction | Non-native Grassland (Riverine) | 33.73689 -117.24617 | 0.021/30 | 0 |

**Table 5.**
**Summary of Impacts to Waters (Cont.)**

| Impact Number | Description of Activity | Habitat Type (MSHCP Designation) | Location (Lat/Long in Decimal Degrees) | Permanent (acres/linear feet) | Temporary (acres/linear feet) |
|---|---|---|---|---|---|
| **VIG1-10** | Vegetation clearing for pole and temporary road construction | Non-native Grassland (Riverine) | 33.73711 -117.24867 | 0.045/30 | 0.397/200 |
| **VIG1-11** | Existing road crossing ephemeral wash with gabion | Unvegetated Channel (Riverine) | 33.73743 -117.25353 | 0.004/30 | 0.001/10 |
| **VIG1-12** | Riparian vegetation trimming for line clearance | Southern Cottonwood/Willow Riparian Forest (Riparian) | 33.73855 -117.26041 | 0.022/60 | 0 |
| **VIG1-13** | Road crossing ephemeral wash with new culvert | Unvegetated Channel (Riverine) | 33.73895 -117.26548 | 0.012/80 | 0.004/40 |
| **VIG1-14** | Temporary road grading across ephemeral wash | Unvegetated Channel (Riverine) | 33.73909 -117.26736 | 0 | 0.007/30 |
| **VIG1-15** | Road crossing ephemeral wash with new culvert | Unvegetated Channel (Riverine) | 33.73945 -117.27129 | 0.014/110 | 0.005/50 |
| **VIG1-16** | Riparian vegetation trimming for line clearance | Southern Willow Scrub (Riparian) | 33.70319 -117.32572 | 0.017/60 | 0 |
| | **Total Impacts** | | | 0.308/1030 | 0.449/450 |

Note:
Impacts VIG1-9 and VIG1-10 are within the floodplain of the San Jacinto River and include portions of vernal pool watershed, but will not impact vernal pools directly or indirectly.
VIG1-8, VIG1-12, and VIG1-16 include a total area of approximately 0.162 acre within which trimming of riparian vegetation will be trimmed every 1-2 years to allow for line clearance according to CPUC and other safety standards. Actual tree canopy cover is less than the 0.162-acre shown in this table. This area of impact will be reduced during construction to the maximum extent practical.

A summary of proposed permanent and temporary impacts to *Riparian/Riverine* communities are described in Table 6 along with proposed mitigation for those impacts.

**Table 6**
**MSHCP Riparian/Riverine Estimated Impacts and Proposed Mitigation**

| Impact Type | Permanent Impacts (acres) | Proposed Mitigation | Temporary Impacts (acres) | Proposed Mitigation |
|---|---|---|---|---|
| **Riparian/Riverine for construction of poles, roads, and drainage structures** | 0.146 | Enhancement of 1.20 acres Riparian/Riverine habitat at Wolfskill/Gilman Springs Property | 0.449 | 0.449 acre restored post-construction |
| **Riparian trimming for line clearance** | 0.162[1] | Placement of 50 willow cuttings along approximate 2.60 acre area of San Jacinto River and Keystone tributary | 0 | NA |
| **Total** | **0.308** | **3.80 acre** | **0.449** | **0.449 acre** |

Note:
[1] - 0.426 acre total (as shown in VIG1-8, VIG1-12, and VIG1-16 in Table 5 above) includes a total area encompassing scattered riparian vegetation. Where needed, this vegetation will be trimmed every 1-2 years to allow for line clearance according to CPUC and other safety standards. Actual tree canopy cover is less than the 0.162-acre shown in this table. This area of impact will be refined and reduced during construction to the maximum extent practical.

Temporary impacts to *Riparian/Riverine* areas will result from the use of temporary work areas and grading through ephemeral washes and existing wet crossings, and includes approximately 0.449 acre. Approximately 0.146 acre of permanent impacts to *Riparian/Riverine* areas will result from construction of gabions in ephemeral drainages, pole siting, and drainage improvements including culvert construction.

Permanent impacts to approximately 0.162 acre of *Riparian* vegetation will result from tree trimming to ensure proper line clearance at the San Jacinto River crossing (VIG1-8 shown on Map 9 in Appendix A1 of the BTR), the unnamed tributary to the San Jacinto River in the vicinity of Keystone Drive (VIG1-12 shown on Map 10 in Appendix A1 of the BTR), and at Rosetta Canyon Drive and SR-74 (VIG1-16 shown on Map 18 in Appendix A1 of the BTR). These areas may be annually or bi-annually maintained and trimmed by hand, under future O&M activities according to CPUC and other safety standards, and are therefore determined to be permanent impacts. However, tree trimming calculations are shown as a “worst-case” based on 100% riparian tree canopy cover of trees assessed to be over 20 feet in height. Actual tree canopy cover is less than the 0.162-acre identified in Table 5 and Table 6. This area of impact will be reduced during the constru ction process to the maximum extent practical. Trimming of tree tops, particularly when being done outside of LBV breeding season, and because LBV typically inhabit the understory of riparian areas, will not result in permanent or temporary loss of habitat functions and values to LBV.

The Project was designed to avoid all *Vernal Pools* in the Project area (Map 9, Appendix A1 of the BTR) and there will be no direct or indirect permanent or temporary impacts to their functions or values. The original MSHCP PSE findings made by the RCA determined the Project to be consistent with the MSCHP when the project features adjacent to the San Jacinto River involved eight pole structures with spans ranging from 210 feet to 329 feet. The 401 Water Quality Certification and the Draft 1602 SAA were also issued using this same original project information. In addition, no issues regarding this area were raised during the 404 Nationwide Permit process. Regardless of receiving permits/findings, the project has sense been redesigned using only four taller TSPs that allow for three 700 foot spans.

The pole locations and new temporary roadways near the San Jacinto River will not redirect or inhibit the floodplain hydrology at the San Jacinto River. Poles will not impede the flow of water through the area and temporary spur roads will be graded flat, level with existing elevations and contours, and no berms will be created that could affect water flow. The temporary spur roads (Map 9, Appendix A1 of the BTR) will be restored to pre-construction contours and may be revegetated after construction. *Vernal Pool* hydrology along the San Jacinto River is related to seasonal stormwater flows overtopping the river banks and filling depressions adjacent to the River. Proposed pole locations and temporary dirt roads graded at existing elevation and contours will not affect this overflow pattern and, thus, there will be no effect to *Vernal Pool* hydrology. Refer to Appendix I in the BTR (AMEC 2014) for engineering documentation supporting no impacts to vernal pool hydrology.

### 4.1.2 Riparian/Riverine Avoidance and Minimization

A full list of measures designed to avoid or minimize potential impacts to sensitive biological resources are included in Section 8.0 of the BTR (AMEC 2014). Measures specific to avoiding or minimizing impacts to *Riparian/Riverine* and *Vernal Pool* resources are included in Table 7 below.

**Table 7**
**Avoidance and Minimization Measures for Impacts Associated with *Riparian/Riverine* and *Vernal Pool* Resources**

| Measure | Description |
|---|---|
| BIO-APM 1 | A qualified biologist will conduct a training session for project personnel prior to grading. The training shall include a description of the species of concern and its habitats, the general provisions of applicable environmental regulations, the need to adhere to the provisions of the regulations, the penalties associated with violating the provisions of the regulations, the general measures that are being implemented to conserve the species of concern as they relate to the Project, and the access routes to and project site boundaries within which the Project activities must be accomplished. |
| BIO-APM 3 | The footprint of disturbance shall be minimized to the maximum extent feasible. Access to sites shall be via pre-existing access routes to the greatest extent possible. |
| BIO-APM 4 | Projects should be designed to avoid the placement of equipment and personnel within stream channels or on sand and gravel bars, banks, and adjacent upland habitats used by target species of concern. |
| BIO-APM 6 | Equipment storage, fueling, and staging areas shall be located on upland sites with minimal risks of direct drainage into riparian areas or other sensitive habitats. These designated areas shall be located in such a manner as to prevent any runoff from entering |

**Table 7**
**Avoidance and Minimization Measures for Impacts Associated with *Riparian/Riverine* and *Vernal Pool* Resources**

| Measure | Description |
|---|---|
| | sensitive habitat. Necessary precautions shall be taken to prevent the release of cement or other toxic substances into surface waters. Project related spills of hazardous materials shall be reported to appropriate entities including but not limited to applicable jurisdictional city, USFWS, CDFW, and RWQCB and shall be cleaned up immediately and contaminated soils removed to approved disposal areas. |
| BIO-APM 7 | Erodible fill material shall not be deposited into water courses. Brush, loose soils, or other similar debris shall not be stockpiled within the stream channel or on its banks. |
| BIO-APM 8 | A qualified biologist shall monitor clearing and grubbing, grading, excavation, and soil movement activities for the Project to ensure that all practicable measures are being employed to avoid incidental disturbance of habitat and species of concern outside the Project footprint. |
| BIO-APM 9 | The removal of native vegetation shall be avoided and minimized to the maximum extent practicable. Temporary impacts shall be returned to preexisting contours and revegetated with appropriate native species. |
| BIO-APM 10 | Construction employees shall strictly limit their activities, vehicles, equipment, and construction materials to the project footprint and designated staging areas and routes of travel. The construction area(s) shall be the minimal area necessary to complete the Project and shall be specified in the construction plans. Construction limits will be fenced with orange snow screen. Exclusion fencing should be maintained until the completion of all construction activities. Employees shall be instructed that their activities are restricted to the construction areas. |
| HYDRO-APM 1 (revised) | The SWPPP would be submitted to Riverside County along with grading permit applications. Implementation of the SWPPP would help stabilize graded areas and waterways, and reduce erosion and sedimentation. The plan would designate BMPs that would be adhered to during construction activities. Erosion-minimizing efforts such as straw wattles, water bars, covers, silt fences, and sensitive area access restrictions (for example, flagging) would be installed before clearing, and grading, and blasting began. Mulching, seeding, or other suitable stabilization measures would be used to protect exposed areas during construction activities. During construction activities, measures would be in place to ensure that contaminants are not discharged from construction sites. The SWPPP would define areas where hazardous materials would be stored, where trash would be in-place, where rolling equipment would be parked,; where helicopters would be landed, fueled and serviced,; and where construction materials such as reinforcing bars and structural steel members would be stored. Erosion control during grading of the construction sites and during subsequent construction would be in-place and monitored as specified by the SWPPP. A silting basin(s) would be established, as necessary, to capture silt and other materials, which might otherwise be carried from the site by rainwater surface runoff. |

**Table 7.**
**Avoidance and Minimization Measures for Impacts Associated with *Riparian/Riverine* and *Vernal Pool* Resources (Cont.)**

| Measure | Description |
|---|---|
| HYDRO-APM 1 (revised) | The SWPPP would be submitted to Riverside County along with grading permit applications. Implementation of the SWPPP would help stabilize graded areas and waterways, and reduce erosion and sedimentation. The plan would designate BMPs that would be adhered to during construction activities. Erosion-minimizing efforts such as ~~straw~~ wattles, water bars, covers, silt fences, and sensitive area access restrictions (for example, flagging) would be installed before clearing, ~~and~~ grading, and blasting began. Mulching, seeding, or other suitable stabilization measures would be used to protect exposed areas during construction activities. During construction activities, measures would be in place to ensure that contaminants are not discharged from construction sites. The SWPPP would define areas where hazardous materials would be stored, where trash would be in-place, where rolling equipment would be parked~~,~~; where helicopters would be landed, fueled and serviced~~,~~; and where construction materials such as reinforcing bars and structural steel members would be stored. Erosion control during grading of the construction sites and during subsequent construction would be in-place and monitored as specified by the SWPPP. A silting basin(s) would be established, as necessary, to capture silt and other materials, which might otherwise be carried from the site by rainwater surface runoff. |
| HYDRO-APM 3 | The SWPPP would include procedures for quick and safe cleanup of accidental spills during construction. This plan would be submitted to Riverside County with the grading permit application. The SWPPP would prescribe hazardous materials handling procedures for reducing the potential for a spill during construction and would include an emergency response program to ensure quick and safe cleanup of accidental spills. The plan would identify areas where refueling and vehicle maintenance activities and storage of hazardous materials, if any, would be permitted. |
| HYDRO-APM 4 | Dewatering operations would be performed if groundwater is encountered while excavating or constructing the proposed subtransmission line, telecommunications line, or Fogarty Substation. These operations would include, as applicable, the use of sediment traps and sediment basins in accordance with BMP NS-2 (Dewatering Operations) from the California Storm water Quality Association's (CASQA) California Storm water BMP Handbook. |
| MM BIO 1-a (c) | SCE will limit removal of native vegetation communities~~,~~ including intact coastal sage scrub, riparian vegetation, wetland habitat, and mature trees. An onsite qualified biologist (i.e., a person with at least an undergraduate degree in biology, ecology, or a related field, with a minimum of 3 years' professional field–experience within the region or working under the direct supervision of a professional biologist with at least 6 years of field experience in the region) with local knowledge of the area will be consulted for identification, flagging of individuals or boundaries of vegetation communities (see MM BIO-2a and 2b for flagging of wetland boundaries), and assessment of sensitive vegetation habitats within the construction footprint. The biologist will provide oversight to ensure compliance of this measure. |
| MM BIO-1c | The Applicant will use standard BMPS to avoid the introduction and/or spread of controllable invasive plant species such as tamarisk (*Tamarix sp*.) and giant reed (*Arundo donax*). Proper handling during construction shall include the following:<br>▪ All vehicles and equipment will be cleaned prior to arrival at the work site. Vehicle washing will concentrate on tracks or tires, on the undercarriage, and on the front bumper/brush guard assemblies.<br>▪ Crews, with construction inspector oversight, will ensure that vehicles and equipment are free of soil and debris capable of transporting noxious weed seeds, roots or rhizomes before the vehicles and equipment are allowed use of access roads.<br>Straw or hay bales used for sediment barrier installations or mulch distribution will be |

**Table 7.**
**Avoidance and Minimization Measures for Impacts Associated with *Riparian/Riverine* and *Vernal Pool* Resources (Cont.)**

| Measure | Description |
|---|---|
| | obtained from state-cleared sources that are free of invasive weeds. |
| MM BIO-2a (revised) | Before construction work will start on Project, the Applicant's qualified wetland biologist will flag the boundaries of wetland resources based on prior surveys (AMEC 2006a, AMEC 2010, Entrix 2006). The wetland biologist shall be a person with at least an undergraduate degree in biology, ecology, or a related field, with U.S. Army Corps of Engineers (USACE) training and a minimum of 3 years' professional field experience within the region or working under the direct supervision of a professional wetland biologist with USACE training and at least 6 years of field experience in the region. For vernal pool wetlands, habitat will be flagged based on the vernal pool watershed (i.e., the internal drainage into the wetland system from the surrounding watershed based on hydrographic breaks) not the wet basin.<br>The Applicant's construction crews will not cross non-culverted drainages with vehicles, nor conduct construction activities or placement of equipment or supplies within the bed, bank, or riparian zone of any drainage, wetland, or water body. Many of the larger creeks flow through culverts beneath existing roads and will not be directly impacted. However, smaller creeks and resources may flow across the ROW and would be affected. Project infrastructure will be designed to avoid all sensitive aquatic resources, including spanning drainages and vernal pools with transmission lines.<br>If construction activities require placement of fill, crews, or equipment in sensitive aquatic resources, or require disturbance to a riparian area or vernal pool watershed, then the Applicant will do the following:<br>• Where avoidance of riparian and wetland areas is not feasible and work is required within jurisdictional wetlands, drainages, and other wetland habitats, or where non-culverted drainages must be crossed to access work sites, the Applicant will obtain and comply with all necessary USACE and ~~CDFG~~CDFW permits under the Clean Water Act and ~~CDFG~~CDFW 1600 regulations. A wetland delineation report will be prepared and submitted to the USACE and ~~CDFG~~CDFW for verification as part of this permit process.<br>• Restore temporarily impacted wetlands, riparian zones, and other aquatic resources to pre-construction conditions, and monitor during and after disturbance. Include aquatic resource restoration efforts in the Habitat Mitigation and Monitoring Plan (MM BIO-1b) that will be developed as part of the regulated waters permitting and/or the DBESP that will be prepared as part of MSHCP PSE compliance for riparian/riverine impacts. ~~This~~ Any mitigation/restoration plans shall also be submitted to and approved by the RCA, USACE, USFWS, ~~CDFG~~CDFW, and the CPUC prior to initiating any mitigation activities. The plan will outline restoration and conservation activities, locations, monitoring requirements, and criteria to measure mitigation success.<br>• Mitigate for permanent impacts on wetlands and riparian areas caused by new structures and fill activities, prior to impact activities. At a minimum, mitigation ratios will be a 1:1 ratio for wetlands and riparian areas. High quality riparian zones, as determined by a qualified wetland biologist in consultation with the CPUC and the RCA, USACE, ~~CDFG~~CDFW, and USFWS will be mitigated at a minimum of 2:1 ratio. Mitigation may include compensation and conservation of in-kind, offsite areas at a minimum ratio of 1:1. |

**Table 7.**
**Avoidance and Minimization Measures for Impacts Associated with *Riparian/Riverine* and *Vernal Pool* Resources (Cont.)**

| Measure | Description |
|---|---|
| MM BIO-2b | BMPs to be prescribed by the Stormwater Pollution Prevention Plan (SWPPP) (APM-BIO 2, Hydro-SCE-1) will include but are not limited to the following:<br>▪ The Applicant will not stockpile brush, loose soils, excavation spoils, or other similar debris material within sensitive habitats.<br>▪ The Applicant will maintain minimum distance of 100 feet for equipment staging, fueling, hazardous material storage/use, and fill stockpile areas from the flagged boundaries of riparian areas and wetlands.<br>▪ If visible dust is present during construction activities, standard dust suppression techniques (e.g., water spraying) will be used in all ground disturbance areas.<br>The BMPs included in the SWPPP will be implemented during construction to minimize indirect impacts associated with erosion and dust generation. The SWPPP will be reviewed and approved by the Santa Ana RWQCB prior to construction commencement (MM HYD-1a). |
| MM HYD-5a (revised) | ~~The environmental training and monitoring program identified in HYDRO-SCE-2 shall be reviewed and approved by the Santa Ana RWQCB for compliance with the Santa Ana Water Quality Control Plan prior to initiation of construction.~~ SCE will obtain Construction General Permit coverage through the State Water Resources Control Board. Verification of approval shall be provided to the CPUC at least 60 days before construction. |
| MM HYD-7a | Aboveground project features such as the TSPs, poles, underground conduit, and substation shall be placed outside the flow path of watercourses unless an engineering analysis, reviewed by the CPUC, demonstrates that watercourse avoidance is not practicable, and that appropriate flood avoidance measures, such as raising foundations, have been taken to identify and prevent potential flooding and erosion hazards. The Applicant shall provide documentation to the CPUC at least 30 days before the start of the construction regarding which structures would be in flow paths and what protective measures, such as design specifications, are proposed. |
| MSHCP BMP-4 | The upstream and downstream limits of projects disturbance plus lateral limits of disturbance on either side of the stream shall be clearly defined and marked in the field and reviewed by the biologist prior to initiation of work. |
| MSHCP BMP-7 | When stream flows must be diverted, the diversions shall be conducted using sandbags or other methods requiring minimal instream impacts. Silt fencing of other sediment trapping materials shall be installed at the downstream end of construction activity to minimize the transport of sediments off site. Settling ponds where sediment is collected shall be cleaned out in a manner that prevents the sediment from reentering the stream. Care shall be exercised when removing silt fences, as feasible, to prevent debris or sediment from returning to the stream. |
| Proposed 401, 404, & 1600 Application Measures | A Stormwater Pollution Prevention Plan (SWPPP) will be developed and implemented in accordance with a General Construction Permit and available for review by the RWQCB prior to construction. Each jurisdictional water impact area will be specifically addressed in the SWPPP and specific BMPs will be established to avoid impacts from stromwater. This project does not require the development of a Water Quality Management Plan (WQMP) for construction of the subtransmission line. The project is commercial/industrial "New Development" and introduces 622 square feet of new impervious surface. This is less than the 10,000 square foot threshold identified in Section XII. D. 2. b. i. on Page 90 of Order No. R8-2010-0033 (NPDES No. CAS 618033). |
| Proposed 401, 404, & 1600 Application Measures | Construction in jurisdictional waters will be scheduled to avoid the rainy season (generally occurring between October and May) to minimize impacts to water quality where applicable. |

**Table 7.**
**Avoidance and Minimization Measures for Impacts Associated with *Riparian/Riverine* and *Vernal Pool* Resources (Cont.)**

| Measure | Description |
|---|---|
| Proposed 401, 404, & 1600 Application Measures | Obtaining "take authorization" of listed species by becoming a PSE in the MSHCP, and complying with all provisions set forth in the MSHCP, including but not limited to: 1) Adhering to policies and procedures in MSHCP Section 6.1.2 (Riparian/Riverine/Vernal Pool Policy), Section 6.1.3 (Narrow Endemic Plant Species Policy), and Section 6.3.2 (Additional Survey Needs and Procedures for Criteria Area Species), and 2) Preparation and compliance with Determination of Biologically Equivalent or Superior Preservation (DBESP). The MSHCP consistency process involves review by CDFG and USFWS |
| Proposed 401, 404, & 1600 Application Measures | Construction activity (including vegetation pruning or removal) will be conducted during the non-breeding season (generally between 31 August and 15 February) for most special status and migratory birds. If work is conducted during the nesting season, a nesting bird survey will be conducted by a qualified biologist prior to construction activities to determine if any active nests are present. Should a legally protected nest be located, the nest area will be avoided by establishing an appropriate buffer to be determined by a qualified biologist. An active nest management plan will be prepared in cooperation with CDFG to provide guidance regarding active nests and buffers. If nests are found on poles planned for replacement or modification, the Applicant would suspend work until the nests are inactive. |
| Proposed 401, 404, & 1600 Application Measures | The Applicant will fully avoid construction activities during the nesting season in areas that provide suitable habitat for the least Bell's vireo and southwestern willow flycatcher (1 March through 31 August). If avoidance of these occupied areas is not possible for MSHCP-covered lands, mitigation will be required in accordance with MSHCP policy. |
| Proposed 401, 404, & 1600 Application Measures | All subtransmission poles would be designed to be raptor-safe in accordance with the Suggested Practices for Raptors on Power Lines: State of the Art in 1996 (Avian Power Line Interaction Committee 1996). |
| Proposed 401, 404, & 1600 Application Measures | Construction work plans/schedules will be designed to minimize construction-related noise in sensitive areas when feasible. In addition, all construction equipment will maintain functional exhaust/muffler systems and idling of motors shall be limited, except as necessary (e.g., concrete mixing trucks). |

Note:
Any underline strike-out in the above measures is due to minor changes/revisions related to the ongoing PMR/PFM process with the CPUC.

### 4.1.3 Riparian/Riverine Mitigation Compliance

Trimming of tree tops to allow for required line clearance, particularly when being done outside of LBV breeding season, and because LBV typically inhabit the understory of riparian areas, will not result in permanent or temporary loss of habitat functions and values to LBV. Impacts to LBV habitat will be avoided and/or minimized within the San Jacinto River, its tributary at Keystone Drive, and at the stream channel near Rosetta Canyon Drive and SR-74. However, construction activities including tree top trimming to allow for line clearance will be conducted in these areas. Riparian vegetation trimming will be limited to outside of the LBV breeding season (generally 1 March through 31 August).

During coordination related to the 1602 Streambed Alteration Agreement process, the CDFW requested that SCE plant 50 willow cuttings near the area(s) disturbed by construction but outside of the area that would require future O&M tree trimming. As such, SCE proposes to plant 50 native willow cuttings (collected from the vicinity of the planting areas, and estimated to cover approximately 0.20 acre at full growth) within their easement along an approximately 2.13 acre area of the San Jacinto River floodplain and/or an approximately 0.47 acre area along the tributary that occurs near Keystone Drive. Refer to Maps 9 and 10 in Appendix A1 for potential locations of proposed planting of willow cuttings. The exact location of willow cutting planting (within the SCE easement) will be determined in the field and placed in areas determined to be most effective and that will not be impacted by O&M activities, thus protected in perpetuity. SCE will prepare a Habitat Mitigation and Monitoring Plan (HMMP) that will detail the planting locations. SCE will monitor the willow planting areas for duration of three years, in conjunction with monitoring of revegetated areas. It was also understood by CDFW that SCE cannot place a conservation easement over the areas where the willows are planted within their facility easements.

Temporarily impacted *Riparian/Riverine* areas (approximately 0.449 acre) will be restored to pre-construction conditions upon completion of the Project. Restoration will involve returning graded areas to pre-construction contours, hydroseeding with native seed mixture similar to what is in place in adjacent areas, establishing temporary erosion controls, and monitoring of those revegetated areas for three (3) years post-construction, or until successful revegetation by native species is confirmed by a qualified biologist in cooperation with the regulated waters permitting agencies.

SCE will mitigate offsite for permanent impacts to 0.146 acre of *Riparian/Riverine* areas caused by new structures and fill activities, including pole placement and road construction in ephemeral drainages. Mitigation will occur on approximately 1.20 acres at the “Wolfskill/Gilman Springs” property within the San Jacinto Watershed. The Wolfskill/Gilman Springs property mitigation site lies within the San Jacinto River Watershed at approximately 33.86867° North, 117.02102° West near Hemet, California (Figure 3). The proposed mitigation site currently supports primarily nonnative tamarisk (*Tamarix* sp.) with small amounts of tree tobacco (*Nicotiana glauca*), Russian thistle (*Salsola kali*), and mustard (*Brassica* spp.). Native plant species that are present onsite and would be preserved and enhanced include Big saltbush (*Atriplex lentiformis*), Mule-fat (*Baccharis salicifolia*), cottonwood (*Populus fremontii*), and California buckwheat (*Eriogonum fasciculatum*). Native willow (*Salix* sp.) would be added to the habitat to match riparian communities occurring upstream of the proposed mitigation site.

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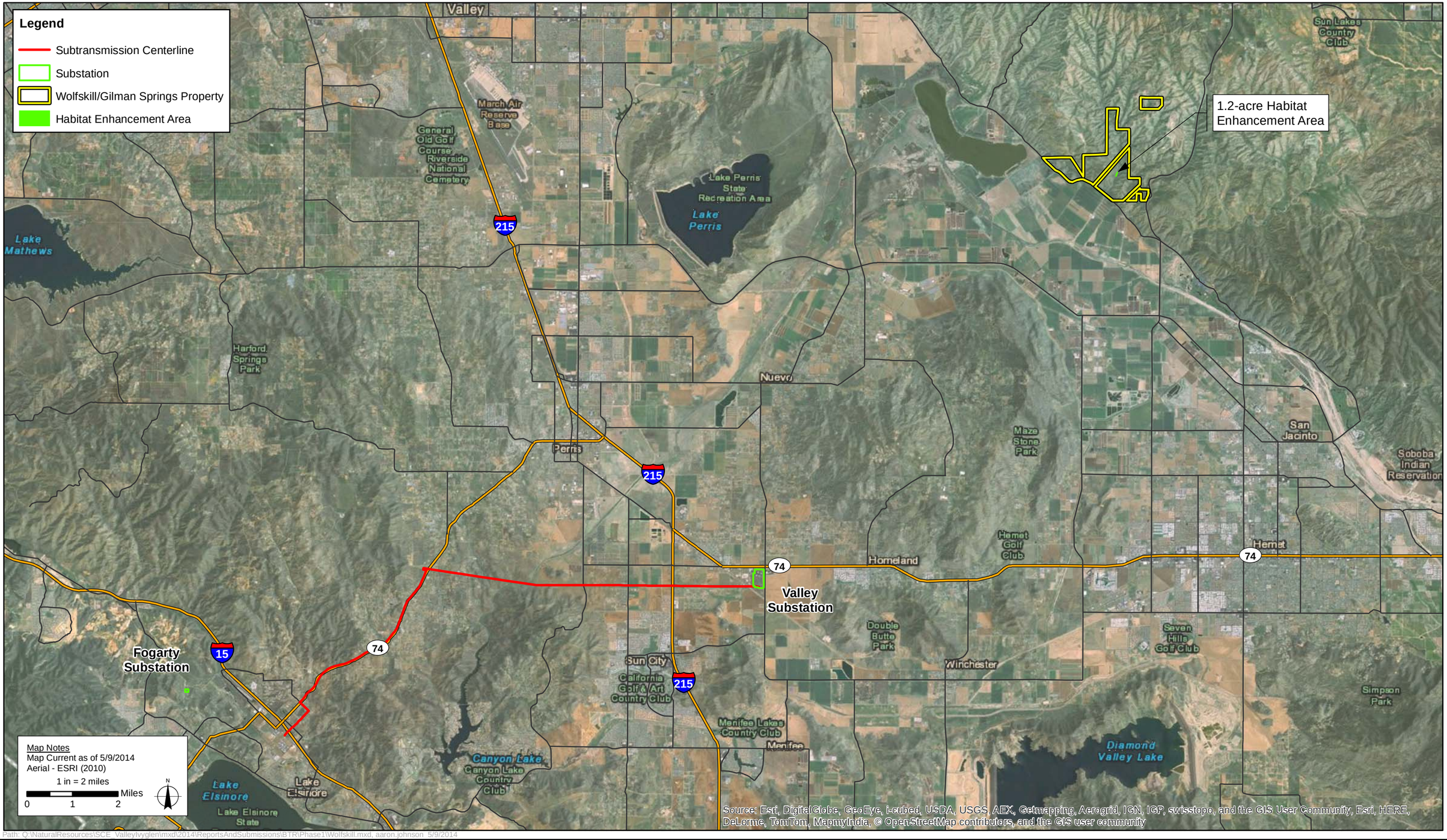


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**Wolfskill/Gilman Springs Mitigation Area**
**Determination of Biologically Equivalent or Superior Preservation Report for the**
**Valley-Ivyglen Subtransmission Line Project, Phase 1**
**Riverside County, California**

**FIGURE**
**3**

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A HMMP would be prepared that includes detailed descriptions and methods of nonnative plant control, planting of native plants, irrigation, maintenance, monitoring, and reporting requirements to be implemented at the Wolfskill/Gilman Springs mitigation site. The HMMP will include descriptions of herbivory control, including rodent populations, to insure survival of established plants. Monitoring, maintenance, and reporting would occur for a minimum of five (5) years to insure proper establishment of the native riparian community. SCE will be responsible for implementing the HMMP to successful completion. The property is part of the RCA preserve system and is currently under conservation easement in perpetuity.

### 4.1.4 Riparian/Riverine Regulatory Compliance

SCE will be resubmitting requests for authorization from U.S. Army Corps of Engineers (USACE) for use of Nationwide Permit 12 for utility line activities under Section 404 of the Clean Water Act, a permit from the Regional Water Quality Control Board (RWQCB) to fulfill requirements of Section 401 of the Clean Water Act, and a Streambed Alteration Agreement (SAA) from the CDFW under Section 1602 of the California State Fish and Game Code. Permit applications were previously submitted to each of these agencies and both the 401 Certification and SAA were issued (September 9, 2011 and May 7, 2012, respectively) with the 404 scheduled for issuance within a few weeks following the others. However, as mentioned above, due to minor changes in project design these permits were put on hold. Applications were revised to include the updated project description, and will be re-submitted parallel to or following the MSHCP PSE application. Avoidance, minimization, and mitigation measures were included in permit applications and will be part of permit conditions when received.

### 4.1.5 Wildlife Movement

Increases in noise, construction traffic, and human activities during construction may temporarily deter movement of wildlife within the Project vicinity. Impacts to wildlife species are considered significant if they 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. Adverse, substantial effects on movement of wildlife or impediments to the use of wildlife corridors or nursery sites are not expected from construction or operational activities of the proposed Project due to the existing disturbed conditions throughout most of the Project area, the short duration of activities, and small project impact area of construction activities.

## 4.2 Indirect Impacts

It is anticipated that there will be some indirect impacts resulting from the Project including: runoff, erosion and siltation, nonnative weeds introduction, increased noise and human activity, light levels, toxic substances, and fugitive dust as described below.

### 4.2.1 Runoff, Erosion, and Siltation

Siltation and erosion resulting from the proposed activities are potentially significant indirect impacts associated with this Project because of the proximity of the proposed work area to *Riparian/Riverine* and *Vernal Pool* habitats. Erosion can remove topsoil necessary for plant

growth both in the graded areas and in areas affected by increased runoff. The eroded soil can be deposited as silt and alluvium in the drainages. Siltation can damage wetlands and aquatic habitats and bury vegetation or topsoil.

Erosion control measures provided in Section 8.0 of the BTR (AMEC 2014) are recommended to reduce potential impacts from Project related activities that would potentially produce runoff, erosion, and siltation. These measures include, but are not limited to the use of qualified biologists for monitoring construction activities, minimizing project footprints, and implementation of an effective Stormwater Pollution Prevention Plan that employs appropriate Best Management Practices (BMPs) to avoid or limit runoff, erosion, and siltation. With these measures, Project related runoff, erosion, and siltation would not be a significant impact.

### 4.2.2 Nonnative Weed Establishment

The loss of topsoil from grading or as a result of overland flow may increase the likelihood of nonnative plant establishment in native communities. Nonnatives may out-compete native species, suppress native recruitment, alter community structure, degrade or eliminate habitat for native wildlife, and provide food and cover for undesirable nonnative wildlife. The introduction of nonnative plant species into a vegetation community as a result of soil disturbance and erosion can increase the competition for resources such as water, minerals, and nutrients between native and nonnative species as well as alter the hydrology and sedimentation rates. In addition, if the nonnative plants form a continuous ground cover, an increase in the natural fire regime may occur, further eliminating any remaining native vegetation, and causing a type conversion to a disturbed/nonnative habitat type. The establishment of nonnative weeds could affect endangered species associated with the surrounding habitat and could therefore be considered potentially significant.

As a means of avoiding and minimizing impacts of nonnative plant establishment, avoidance and minimization measures shall be implemented during Project construction. These measures include the use of qualified biologists for monitoring construction activities, minimizing disturbance areas, employing appropriate BMPs to avoid introduction of nonnative species including equipment washing and use of weed free erosion control products, and removing exotic species that prey on or displace native species of concern.

### 4.2.3 Noise and Human Presence

Indirect impacts to wildlife due to construction noise, including presence of humans, would be expected during construction of the proposed Project. Noise can adversely affect wildlife by frightening or repelling individuals, masking communication, and impairing foraging success and predator detection. These effects are significant when they adversely affect the lifecycle of sensitive species, or constrain wildlife movement through a wildlife corridor. However, these impacts would not be considered significant if the activities were temporary in nature and of short duration, and could be mitigated through implementation of avoidance and minimization measures.

Construction noise has the potential to impact the lifecycle of sensitive wildlife species known to occur within the Project vicinity. The current threshold for significant noise impacts to nesting bird species is generally accepted to be 60 decibels during the breeding season. If construction were to occur outside of the breeding season for these species, noise impacts would not be considered significant. Should construction be required near sensitive habitats during the breeding season, avoidance and minimization measures shall be implemented in order to protect special status species from excess levels of noise and human presence. These measures include the use of qualified biologists for monitoring construction activities, conducting pre-construction nesting bird surveys, and implementing a Nesting Bird Management Plan to establish avoidance buffers (and other measures) to avoid impact to nesting birds in consultation with regulatory agencies including CPUC, CDFW and USFWS. With these practices in places, noise and human presence from construction activities would be minimized and are not be expected to be an adverse significant impact on these special status species.

### 4.2.4 Lighting

If used, nighttime lighting entering adjacent wildlife habitat from construction could temporarily impact sensitive wildlife species and wildlife movement. These temporary impacts would likely be considered adverse, but not significant, unless sensitive bird species were found nesting within the area of the lighting impact. These impacts could be avoided if nighttime work did not occur during construction of the Project. However, if such work is required in or adjacent to the wildlife habitats, lighting would be temporary, shielded, and directed away from the area to the extent possible.

### 4.2.5 Toxic Substances

Toxic substances can kill wildlife and plants or prevent new growth where soils or water are contaminated. Toxic substances can be released into the environment through several scenarios including accidental releases, leaching from stored materials, pesticide or herbicide use, or fires, among others. No intentional releases of toxic substances are planned as part of the proposed Project. Accidental releases could occur from several sources such as leaking equipment or fuel spills during the course of the construction. The implementation of BMPs during construction will reduce the risk of leaks and fuel spills below a level of significance. A spill contingency plan, written by the construction contractor and approved prior to construction, will be in effect during all phases of construction activities.

### 4.2.6 Fugitive Dust

Trenching, grading, and vehicle operations associated with the construction of the proposed Project may produce fugitive dust. Excessive dust can damage or degrade vegetation by blocking leaf exposure to sunlight or affect wildlife through disruption of normal foraging activities. Implementation of dust control measures, include spraying work or driving areas with water and careful operation of equipment, as part of BMPs during construction, will reduce fugitive dust emissions to below a level of significance.

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# 5.0 FINDINGS

As described in Section 2 of this report, MSHCP *Section 6.1.2* requires that all vernal pool, riverine, and riparian habitat be mapped, documented, and avoided. If habitat avoidance is not practical, species surveys must be completed to assess the presence-absence of Covered Species within these habitat areas. Avoided habitats, or the demonstrated lack of species presence within suitable habitats, will constitute consistency with the MSHCP.

The Project was designed to avoid *Riparian/Riverine* areas by spanning those resources to the greatest extent possible; however, minimal temporary and permanent impacts would result from road improvements and pole siting at several locations.

Temporary impacts to *Riparian/Riverine* areas will result from the use of temporary work areas and grading through ephemeral washes at existing wet crossings, and includes approximately 0.449 acres of temporary impacts. Approximately 0.146 acre of permanent impacts to *Riparian/Riverine* areas will result from construction of gabions in ephemeral drainages pole siting, and drainage improvements including culvert construction. Permanent impacts due to construction of culverted and non-culverted crossings in *Riparian/Riverine* areas will not impact the existing functions and values of the drainage or the conveyance of flow (passing freshwater during storm events). Although the water quality may potentially be impacted during construction activities, measures, including implementation of standard BMPs, will avoid or minimize these impacts.

Permanent impacts to approximately 0.162 acre of *Riparian* vegetation will result from tree trimming to ensure proper line clearance at the San Jacinto River crossing, the unnamed tributary to the San Jacinto River near Keystone Drive, and at Rosetta Canyon Drive and SR-74. These areas may be annually or bi-annually maintained and trimmed by hand, under future O&M activities according to CPUC and other safety standards, and are therefore determined to be permanent impacts. However, tree trimming calculations are shown as a “worst-case” based on 100% riparian tree canopy cover of trees assessed to be over 20 feet in height. Actual tree canopy cover is less than the 0.162-acre identified. This area of impact will be reduced during construction to the maximum extent practical.

Avoidance and minimization measures, as presented in Table 7 of this report, shall be implemented in order to minimize additional impacts to *Riparian/Riverine* areas. During coordination related to the 1602 Streambed Alteration Agreement process, the CDFW requested that SCE plant 50 willow cuttings near the area(s) disturbed by construction but outside of the area that would require future O&M tree trimming. As such, SCE proposes to plant 50 native willow cuttings (collected from the vicinity of the planting areas, and estimated to cover approximately 0.20 acre at full growth) within their easement along an approximately 2.13 acre area of the San Jacinto River floodplain and/or an approximately 0.47 acre area along the tributary that occurs near Keystone Drive. Refer to Maps 9 and 10 in Appendix A1 for potential locations of proposed planting of willow cuttings. The exact location of willow cutting planting (within the SCE easement) will be determined in the field and placed in areas determined to be most effective and that will not be impacted by O&M activities, thus protected in perpetuity. SCE will prepare a Habitat Mitigation and Monitoring Plan (HMMP) that will detail the planting

locations. SCE will monitor the willow planting areas for duration of three years, in conjunction with monitoring of revegetated areas. It was also understood by CDFW that SCE cannot place a conservation easement over the areas where the willows are planted within their facility easements.

Temporarily impacted *Riparian/Riverine* areas (0.449 acre) will be restored to pre-construction conditions after completion of the Project. Restoration will involve restoring the area to pre-construction topography, hydroseeding with native seed mixture similar to what is in place in adjacent areas, establishing temporary erosion controls, and monitoring of those revegetated areas for three (3) years post-construction, or until successful revegetation by native species is confirmed by a qualified biologist.

SCE will mitigate offsite for permanent impacts to 0.146 acres of *Riparian/Riverine* areas caused by new structures and fill activities, including pole placement and road construction. Mitigation would be provided by preparation of a mitigation agreement with RCA to enhance approximately 1.20 acres of riparian habitat at the Wolfskill/Gilman Springs property within the San Jacinto Watershed. The enhancement activities will include nonnative plant removal, native plant installation, monitoring, maintenance, and reporting of the restoration site for a minimum of five (5) years.

The Project was designed to avoid all *Vernal Pools* in the Project area and there will be no direct or indirect permanent or temporary impacts to their functions or values. The pole locations and new temporary roadways near the San Jacinto River will not redirect or inhibit the floodplain hydrology at the San Jacinto River. Poles will not impede the flow of water through the area and temporary roads will be graded flat, level with existing elevations and contours, and no berms will be created that could affect water flow. The temporary roads will be restored to pre-construction contours and revegetated after construction. *Vernal Pool* hydrology along the San Jacinto River is related to seasonal stormwater flows overtopping the river banks and filling depressions adjacent to the river. Proposed pole locations and temporary dirt roads graded at existing elevation and contours will not affect this overflow pattern and, thus, there will be no effect on *Vernal Pool* hydrology.

Surveys were conducted within all suitable *Riparian/Riverine* and *Vernal Pool* habitat areas of the Project for species presented in *Section 6.1.2* of the MSHCP that have potential to occur within the Project area. As such focused surveys were conducted for the following species:

- rare plants
- least Bell's vireo
- southwestern willow flycatcher
- western yellow-billed cuckoo
- Riverside fairy shrimp
- Santa Rosa Plateau fairy shrimp
- vernal pool fairy shrimp

Only one species listed above, LBV, was identified within the Project area. Occupied breeding LBV territories were found to occur within the riparian habitats in the tributary to the San Jacinto River near Keystone Drive and the stream channel that occurs near Rosetta Canyon Drive and SR-74. Further, the San Jacinto River area is known use corridor between LBV territories.

The Project requires the trimming of 0.162 acre (worst case) of riparian habitat to allow for line clearance at the San Jacinto River crossing, the crossing at the tributary to the San Jacinto River near Keystone Drive, and the crossing at Rosetta Canyon Drive and SR-74. Trimming of tree tops, particularly when being done outside of LBV breeding season, will not result in permanent or temporary loss of habitat functions and values for LBV. Potential indirect affects could occur during construction, however, these would be avoided and/or minimized with adherence to the measures that will be implemented for the Project (refer to Section 4.1.2 of this document and Section 8.0 of the BTR for a list of measures). The Project will have no significant impact on LBV, and as such, the proposed Project is consistent with MSCHP *Section 6.1.2*.

All depressions that held water and had potential to support vernal pool endemic species were mapped during focused fairy shrimp surveys. Although the majority of inundated areas were not considered to meet the definition of a *Vernal Pool*, they do provide fairy shrimp habitat. No protected fairy shrimp species were detected during the multiple years of surveys; however, the common versatile fairy shrimp (*Branchinecta lindahli*) was present in many pools and depressions. No sensitive vernal pool plants were identified during focused surveys of inundated areas. As such, the proposed Project is consistent with MSCHP *Section 6.1.2*.

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