

Squaw Mountain Road Bridge Repair Project

Determination of Biologically Equivalent or Superior Preservation Report

September 2, 2014

BSS

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I. INTRODUCTION

The purpose of this Determination of Biologically Equivalent or Superior Preservation (DBESP) analysis is to summarize our analysis of KB Home's Squaw Mountain Road Bridge Repair project to comply with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The proposed project would affect MSHCP Riparian/Riverine Areas.

MSHCP Section 6.1.2, Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools, states:

"The purpose of the procedures described in this section is to ensure that the biological functions and values of these areas throughout the MSHCP Plan Area are maintained such that Habitat values for species inside the MSHCP Conservation Area are maintained."

For projects that propose impacts to Riparian/Riverine or Vernal Pool resources, a DBESP assessment must be completed to ensure that the proposed project provides for "replacement of any lost functions and values of Habitat as it relates to Covered Species." This DBESP analysis provides information necessary for the County of Riverside (County) to find that the proposed project meets these objectives.

II. DEFINITION OF PROJECT AREA

The Squaw Mountain Road Bridge is located in unincorporated southwestern Riverside County, south of the City of Corona, California. The project site is situated in Temescal Canyon west of Interstate 15 (Figure 1), in the community of Painted Hills. It is located in Sections 2 and 3, Township 5 South, Range 6 West on the U.S. Geological Service Lake Matthews 7.5-minute quadrangle (Figure 2) and comprises 0.72-acre in Assessor's Parcel Numbers 290-050-030, 290-190-028, and 290-190-047. Temescal Canyon road to the east (Figure 3) is the closest cross street. The project site consists of the Squaw Mountain Road Bridge where it crosses Coldwater Wash, portions of Coldwater Wash disturbed by bridge repair, and an adjacent unnamed small tributary (Figure 3). The center of the project site is located at Latitude 33°46'6.575" N, Longitude 117°29'9.924" West. The bridge was originally constructed as part of the Painted Hills Residential Development project in 2002.

The project site is located within the boundaries of the MSHCP Temescal Canyon Area Plan. It is not within any Criteria Cells, Public/Quasi Public Lands, or Riverside Conservation Authority (RCA) conserved lands. This proposed project is for the repair of the Squaw Mountain Road Bridge and does not include new development. The bridge is in need of repair due to erosion damage as described in Section III.

III. PROJECT DESCRIPTION

The existing Squaw Mountain Road Bridge was originally approved and constructed in 2002, and is in need of repair due to erosion by Coldwater Wash. The scouring at the bridge was discovered after a large storm in January 2012. The proposed repairs would consist of lining the channel bottom below the bridge with concrete, connecting the concrete-lined channel to the existing bridge abutments, placing quarter-ton riprap on the upstream and downstream sides of the concrete-lined portion of the channel (some of which would be buried by fill), and installing riprap slope protection on the northwest slope. As part of the repairs, an existing asphalt access road would be extended approximately 40 feet.

There is also a small tributary to Coldwater Wash that was realigned as part of the original Painted Hills Residential Development project and was intended to flow parallel to Squaw Mountain Road before entering the wash. As a result of significant degradation of the Coldwater Wash channel, the side channel has head-cut back from the wash and is now eroding into the slope of the Squaw Mountain Road embankment. The proposed repairs would consist of regrading the tributary channel upstream (south) of Squaw Mountain Road to the appropriate elevation and leaving this portion of the channel as a natural drainage. Flows would then be collected in a basin and conveyed to Coldwater Wash in a pipe that would discharge at the base of the Squaw Mountain Road embankment upstream of the bridge.

The proposed project has been designed to avoid as much of the extant Riparian/Riverine Areas as possible while still providing a hydraulically stable channel over the long term. Permanent impacts to Riparian/Riverine Areas would result from the installation of concrete lining below the bridge, connecting the concrete-lined channel to the existing bridge abutments, placing quarter-ton riprap on the upstream and downstream sides of the concrete-lined portion of the channel, and installing riprap slope protection on the northwest slope. Temporary impacts will result upstream and downstream of the riprap as a result of grading necessary to bring grades to an elevation consistent with permanent impact areas. These temporary impact areas will be restored to Riparian habitat following completion of construction.

IV. METHODS

HELIX Environmental Planning, Inc. (HELIX) biologist Larry Sward conducted a formal delineation of federal waters of the U.S. (WUS) and waters of the state (WS) for the project on August 27, 2012. HELIX biologist Rob Hogenauer followed up the delineation with a Riparian/Riverine and Vernal Pool habitat assessment and search for Riparian/Riverine species on March 11 and April 16, 2013 (as no Vernal Pool habitats are present). The work conducted by Mr. Sward and Mr. Hogenauer is the basis for the Riparian/Riverine and Vernal Pool habitats assessment, which, according to the MSHCP definition, are as follows:

• Riparian/Riverine areas are lands that contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or depend upon soil moisture from a nearby freshwater source; or areas with freshwater flow during all or a portion of the year.



Regional Location Map

SQUAW MOUNTAIN ROAD





SQUAW MOUNTAIN ROAD





Aerial Photograph

SQUAW MOUNTAIN ROAD

HELIX Environmental Planning 100 — Feet

• Vernal pools are seasonal wetlands that occur in depression areas that have wetland indicators of all 3 parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season, while upland species (annuals) may be dominant during the drier portion of the growing season. The determination that an area exhibits vernal pool characteristics and the definition of the watershed supporting vernal pool hydrology must be made on a case-by-case basis. Such determinations should consider the length of time the area exhibits upland and wetland characteristics and the manner in which the area fits into the overall ecological system as a wetland. Evidence concerning the persistence of an area's wetness can be obtained from its history, vegetation, soils, and drainage characteristics, uses to which it has been subjected, and weather and hydrologic records.

All areas with depressions, drainage channels, or wetland vegetation were evaluated for the presence of Riparian/Riverine and Vernal Pool resources in the project study area. Riparian/Riverine boundaries were determined based on the presence of riparian vegetation or regular surface flow. These resources include all riparian shrub or tree canopy that may extend beyond stream banks.

Plants were identified according to The Jepson Manual: Vascular Plants of California (Baldwin et al. [2012]). Wetland affiliations of plant species follow the National Wetland Plant List (Lichvar 2012). Soils information was taken from Knecht (1971) and the U.S. Department of Agriculture's Web Soil Survey (2013).

V. RIPARIAN/RIVERINE AND VERNAL POOL RESOURCES

A. RIPARIAN/RIVERINE AND VERNAL POOL HABITATS

Vegetation within the study area consists primarily of riparian communities, as the project is the repair of a bridge over Cold Water Wash. Vegetation communities in the study area are comprised of mule fat scrub, Riversidean alluvial fan sage scrub, southern willow scrub, tamarisk scrub, Riversidean sage scrub, non-native grassland, eucalyptus woodland, non-native vegetation, disturbed habitat, and developed (Figure 4). There are no vernal pool habitats in the study area.

Riparian/Riverine habitats in the study area cover a total of 0.72 acre and include mule fat scrub, Riversidean alluvial fan sage scrub, southern will scrub, and streambed tamarisk scrub (Table 1; Figure 5).

Table 1 RIPARIAN/RIVERINE HABITATS IN THE SQUAW MOUNTAIN ROAD BRIDGE REPAIR PROJECT SITE			
HABITAT	AREA¹ (acres)		
Mule fat scrub	0.20		
Riversidean alluvial fan sage scrub	0.02		
Southern Willow Scrub	0.16		
Streambed	0.33		
Tamarisk Scrub	0.01		
TOTAL	0.72		

¹ Rounded to nearest one-hundredth.

B. RIPARIAN/RIVERINE AND VERNAL POOL SPECIES

The definition of Riparian/Riverine habitats is based on potential for the habitat to support Riparian/Riverine Covered Species, which are identified in MSHCP Section 6.1.2 and described below. Since there are no Vernal Pool habitats in the study area, there is no potential for Vernal Pool Covered Species to be present.

1. Plants

Twenty-three plant species are identified in the MSHCP as potentially occurring in Riparian/Riverine and Vernal Pool habitats. The 2013 surveys revealed that none of these is present in the study area.

California black walnut (Juglans californica var. californica), Engelmann oak (Quercus englemannii), and Coulter's matilija poppy (Romneya coulteri) are conspicuous species that would have been seen if present in the Project site. California Orcutt grass (Orcuttia californica), spreading navarretia (Navarretia fossalis), thread-leaved brodiaea (Brodiaea orcuttii), San Miguel savory (Satureja chandleri), graceful tarplant (Holocarpha virgata ssp. elongata), prostrate navarretia (Navarrettia protrata), San Diego button-celery (Eryngium artisulatum var. parishii), Orcutt's brodiaea (Brodiaea orcuttii), Fish's milkwort (Polygala cornuta var. fishiae), lemon lily (Lilium parryi), San Jacinto Valley crownscale (Atriplex coronata var. notatior), Mojave tarplant (Deinandra mohavensis), Brand's phacelia (Phacelia stellaris), Santa Ana River woolly-star (Eriastrum densifolium spp. sanctorum), vernal barley (Hordeum intercedens), and Parish's meadowfoam (Limnathes gracilis var. parishii) occur in habitats that do not occur on the property (e.g., vernal pools) or have distributions well outside of the property. Mud nama (Nama stenocarpum) is restricted to muddy embankments of marshes and swamps and within lake margins and riverbanks. Ocellated Humboldt lily (Lilium humboldtii ssp. ocellatum) is associated with riparian corridors in coniferous forest and chaparral habitats. Within Western Riverside County, ocellated Humboldt lily is restricted to canyons along the east slope of the Santa Ana Mountains and the north slope of the Palomar Mountains.



Vegetation









100 — Feet

Slender-horned spineflower (*Dodecahema leptoceras*) is typically found in mature alluvial scrub with sandy soils but is also found in rocky soils and open chamise chaparral. Ideal habitat is thought to be benches or terraces that receive overbank flow every 50 to 100 years. Habitat for this species occurs as the Riversidean alluvial fan sage scrub located in Coldwater Wash. This species was not observed, however, during HELIX's surveys for the project, and given the disturbed nature of the study area, it is not expected to occur.

Smooth tarplant (*Centromadia pungens* ssp. *laevis*) is found in southwestern California and northwestern Baja California, Mexico (Baja), and occurs in San Bernardino, Riverside, and San Diego counties. This species occurs in open spaces within a variety of habitats, including alkali scrub and playas, riparian woodland, watercourses, and grasslands with alkaline affinities (Dudek 2003; CNPS 2013). This species was not observed during HELIX's surveys conducted for the project; therefore it is presumed to be absent from the study area.

Based on the surveys conducted by Mr. Hogenauer on March 11 and April 16, 2013, and the above analysis, none of the 23 Riparian/Riverine plant species occurs in the study area. No impacts to MSHCP Section 6.1.2 plant species are, therefore, anticipated.

2. Animals

Invertebrates

Vernal pool fairy shrimp (*Branchinecta lynchi*) occurs throughout the Central Valley and in several disjunct populations in Riverside County. This species exists in vernal pools and other ephemeral basins, often located in patches of grassland and agriculture interspersed in Diegan coastal sage scrub and chaparral. Riverside fairy shrimp (*Streptocephalus woottoni*) occurs in Riverside, Orange, and San Diego counties as well as in northern Baja. This species is typically found in deeper vernal pools and other ephemeral basins that hold water for long periods of time (30 or more days). Santa Rosa Plateau fairy shrimp (*Linderiella santarosae*) are limited to the Santa Rosa Plateau. No areas potentially suitable for fairy shrimp occur in the study area; therefore, surveys for sensitive fairy shrimp are not required.

Fish

The Santa Ana sucker (*Catastomus santaanae*) is restricted to the Santa Ana River watershed with year-round flows. No appropriate habitat occurs within the study area.

Amphibians

No appropriate habitat for the 3 amphibian species (arroyo toad [*Bufo californicus*], mountain yellow-legged frog [*Rana muscosa*], or California red-legged frog [*Rana aurora draytonii*]) listed under MSHCP 6.1.2 occurs within the study area, and none of these species has any potential to occur there.

Birds

The least Bell's vireo (Vireo bellii pusillus) is found in riparian scrub, forest, and woodland habitats that typically feature dense cover within 1 to 2 meters of the ground and a dense, stratified canopy. It inhabits low, dense riparian growth along water or dry parts of intermittent streams. Typically, the vireo 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. It uses habitat limited to the immediate vicinity of water. The vireo primarily nests in vegetation typically dominated by willows and mule fat but may also use a variety of shrubs, trees, and vines. The riparian habitats that occur in the study area do not have the understory or dense stratified canopy associated with least Bell's vireo habitat. Additionally there is no regular flow of water in the wash or side channel. The southern willow scrub in the study area occurs as 5 small patches that total 0.16 acres. These small patches do not have the size or canopy to be considered potential habitat for least Bell's vireo. The mule fat scrub on the project site occurs as 8 sparsely vegetated patches totaling 0.20 acre. The sparse, scattered mule fat scrub does not constitute habitat with potential to support least Bell's vireo. Therefore, a survey is not required. These habitats have potential to be nesting habitat for other birds, however, and as such, KB Home has agreed to implement avoidance measures during the breeding season.

The southwestern willow flycatcher (*Empidonax traillii extimus*) is restricted to dense riparian woodlands along streams and rivers with mature, dense stands of willows, cottonwoods (*Populus* spp.), or smaller spring fed or boggy areas with willows or alders (*Alnus* spp.). It breeds in relatively dense riparian habitats. The study area does not include dense riparian woodland habitats. No impacts to habitat with potential to support southwestern willow flycatcher are proposed; therefore, surveys are not required.

The western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) requires dense, wide riparian woodlands with well-developed understories for breeding. It occurs in densely foliaged, deciduous trees and shrubs, especially willows that are required for roost and nest sites. When breeding, the cuckoo is restricted to river bottoms and other mesic habitats where humidity is high and where dense understory abuts slow-moving watercourses, backwaters, or seeps. Willow is almost always a dominant component of the vegetation. There is no suitable habitat within the study area to support the cuckoo.

Both the bald eagle (*Haliaeetus leucocephalus*) and peregrine falcon (*Falco peregrinus*) occur primarily in and adjacent to open water habitats, with the falcon possibly foraging in riparian areas near breeding sites. The peregrine falcon nests on large cliffs that are generally 200 to 300 feet in height. No open water is present in the study area, and no large cliffs are present in the vicinity of the study area. Therefore, no suitable habitat occurs within the study area for these species.

VI. IMPACTS

A. RIPARIAN/RIVERINE HABITATS

As described above, the emphasis of the MSHCP's Riparian/Riverine and Vernal Pool policy is on conservation of habitats capable of supporting MSHCP Covered Species. The goal of the DBESP process is to determine if the proposed project has, in fact, provided for a project alternative that results in biologically equivalent or superior preservation. The first priority for Riparian/Riverine habitats that have potential to contribute to the biological values of the MSHCP preserve is avoidance of direct impacts. The proposed project is for the repair of an existing bridge due to scour erosion by Coldwater Wash. The project proposes impacts to 0.72 acres of Riparian/Riverine habitat. These impacts are comprised of 0.27 acre of permanent impacts and 0.45 acre of temporary impacts. Reduction of these proposed impacts would potentially result in the bridge requiring repairs from the next large storm due to a lack of scour protection.

The proposed permanent impacts are comprised of 0.04 acre mule fat scrub, <0.01 acre Riversidean alluvial fan sage scrub, 0.03 acre southern willow scrub, and 0.20 acre of unvegetated streambed. The proposed temporary impacts are 0.16 acre mule fat scrub, 0.02 Riversidean alluvial fan sage scrub, 0.13 acre southern willow scrub, 0.13 acre streambed, and 0.01 acre tamarisk scrub (Table 2; Figure 6). The Riparian/Riverine habitats proposed to be impacted do not support Riparian/Riverine target species and do not contribute substantially to the on-site biological values of the MSHCP because the impact area is outside of any Criteria Cells and is not targeted for conservation. The functions of the unvegetated Riverine streambeds within the project impact area are primarily water conveyance, sediment transport, and energy dissipation (hydrologic regime and flood attenuation). The mule fat scrub, Riversidean alluvial fan sage scrub, southern willow scrub, and tamarisk scrub provide the aforementioned functions. They also provide nutrient retention and transformation, sediment trapping, and uptake of toxics, along with providing cover for wildlife movement and habitat for nesting birds.

Table 2 PROPOSED IMPACTS TO RIPARIAN/RIVERINE RESOURCES FROM THE SQUAW MOUNTAIN ROAD BRIDGE REPAIR PROJECT (ACRES)				
HABITAT	PERMANENT IMPACTS	TEMPORARY IMPACTS	TOTAL IMPACTS	
Mule fat scrub	0.04	0.16	0.20	
Riversidean alluvial fan sage scrub	< 0.01	0.02	0.02	
Southern willow scrub	0.03	0.13	0.16	
Streambed	0.20	0.13	0.33	
Tamarisk scrub	0	0.01	0.01	
TOTAL	0.27	0.45	0.72	

Of the 0.27 acre of permanent impacts, 0.22 acre is under the existing bridge that has very limited resource value and was previously mitigated for by the project, or is part of the side tributary to the wash that is redirected flow from development that was not part of an original drainage feature. Approximately 0.14 acre of the 0.45 acre of temporary impacts is in areas that were previously impacted by bridge construction or within the redirected side channel.

B. RIPARIAN/RIVERINE COVERED SPECIES

None of the species covered under Section 6.1.2 are anticipated to occur within the impact area. The streambeds and associated vegetation (Table 2) in the impact area are considered Riparian/Riverine and as these met the MSHCP definition for Riparian/Riverine and are tributary to downstream resources with potential to support sensitive riparian species.

VII. AVOIDANCE AND MITIGATION

A. AVOIDANCE

MSHCP Section 6.1.2 states that, "The purpose of the procedures described in this section is to ensure that the biological functions and values of these areas throughout the MSHCP Plan Area are maintained such that Habitat values for species inside the MSHCP Conservation Area are maintained." The project, however, is not located inside MSHCP Conservation Area.

The first priority for Riparian/Riverine habitats within Cell Criteria areas that have potential to contribute to MSHCP preserve biological values is avoidance of direct impacts. The project, however, is not located in Cell Criteria areas.

The MSHCP states that:

"...[f]or identified and mapped resources not necessary for inclusion in the MSHCP Conservation Area, applicable mitigation under CEQA, which may include federal and state regulatory standards related to wetland functions and values, will be imposed by the Permittees. To ensure that these standards are met, Permittees shall ensure that, through the CEQA process, project applicants develop project alternatives demonstrating efforts that first avoid, and then minimize direct and indirect effects to the mapped wetlands and shall review these alternatives with the Permittee. An avoidance alternative shall be selected, if feasible. If an avoidance alternative is selected, measures shall be incorporated into the project design to ensure the long-term conservation of the areas to be avoided.

If an avoidance alternative is not feasible, a practicable alternative that minimizes direct and indirect effects to Riparian/Riverine areas and vernal pools and associated functions and values to the greatest extent possible shall be selected. Those impacts that are unavoidable shall be mitigated such that the lost functions





Riparian/Riverine Impacts

SQUAW MOUNTAIN ROAD



and values as they relate to Covered Species are replaced as set forth below under the Determination of Biologically Equivalent or Superior Preservation."

The first priority for sensitive habitats (which includes the Riparian/Riverine habitats) under the California Environmental Quality Act (CEQA) and under the MSHCP is avoidance of direct impacts. The project has been redesigned, as described earlier in Section III, to avoid as much of the impacts to the Riparian/Riverine resources as is feasible while still meeting project objectives of protecting the bridge from future scour. The earlier design would have impacted in excess of one acre of Riparian/Riverine habitats; the redesigned proposed project would impact a total of 0.72 acre of Riparian/Riverine habitats. Any additional changes to the proposed project design to further reduce impacts would potentially result in the bridge requiring future repairs due to a lack of scour protection.

The proposed project minimizes the permanent impact area to 0.27 acre of Riparian/Riverine habitats and the temporary impact area to 0.45 acre of Riparian/Riverine habitats. As noted earlier, of the 0.27 acre of permanent impacts, 0.22 acre is under the existing bridge that has very limited resource value and was previously mitigated for by the project, or is part of the side tributary to the wash that is redirected flow from development that was not part of an original drainage feature. Approximately 0.14 acre of the 0.45 acre of temporary impacts is in areas that were previously impacted by bridge construction or within the redirected side channel.

Total avoidance of impacts can be achieved only by a no project alternative. A no project alternative does not provide for necessary protection of the existing bridge structure.

B. MITIGATION

Mitigation measures are proposed that would result in equivalent or superior preservation of the functions and values of Riparian/Riverine resources impacted by the proposed project.

The proposed mitigation would occur in accordance with the wetland mitigation plan prepared for the project by HELIX (2013). A summary of the proposed mitigation is discussed below.

Mitigation for temporary impacts to 0.45 acre of Riparian/Riverine habitats (includes WUS and WS) would be accomplished through on-site restoration of the 0.45 acre of temporarily impacted area (Figure 6; Table 3). Mitigation for permanent impacts to 0.27 acre would be accomplished by participation in the Riverside-Corona Resource Conservation District (RCRCD) In Lieu Fee program. Mitigation for permanent impacts will occur at a 3:1 ratio for mule fat scrub and southern willow scrub, and at a 1:1 ratio for streambed and tamarisk scrub (Table 3). Total required mitigation for temporary and permanent proposed project impacts comprises a total of 0.86 acre resulting from impacts to a total of 0.72 acre of impacts to Riparian/Riverine habitats.

Specifically, on-site mitigation for temporary impacts would be accomplished through the restoration of 0.33 acre of riparian scrub and 0.12 acre of southern willow scrub (HELIX 2013). The on-site mitigation would also include restoration of 0.06 acre of upland scrub adjacent to the riparian habitat. The riparian habitat restored would be equal to, or of higher quality than, the habitat being impacted and would contribute to the long-term conservation goals of the MSHCP.

HELIX Environmental Plan

Mitigation for permanent impacts would specifically occur via purchase of 0.41 acre through the RCRCD In Lieu Fee program. This mitigation would support species targeted for conservation in Section 6.1.2 of the Western Riverside County MSHCP and is within the MSHCP Conservation Area. It should also be noted that the project originally purchased 1.0 credit from the Santa Ana River Wetlands Mitigation Bank in 2001 to mitigate for initial project impacts.

The habitat restoration and In Lieu fee credits of 0.86 acre of Riparian/Riverine habitats would meet the definition of a Biologically Equivalent Preservation Alternative consistent with MSHCP Section 6.1.2.

Table 3MITIGATION FOR IMPACTS FROM THE SQUAW MOUNTAINROAD BRIDGE REPAIR PROJECT							
ΠΑΡΙΤΑΤ		IMPACTS			MITIGATION		
	Permanent	Temporary	TOTAL	Permanent	Temporary	TOTAL	
Mule fat scrub	0.04	0.16	0.20	0.12	0.16	0.28	
Riversidean alluvial fan sage scrub	<0.01	0.02	0.02	0	0.02	0.02	
Southern willow scrub	0.03	0.13	0.16	0.09	0.13	0.22	
Streambed	0.20	0.13	0.33	0.20	0.13	0.33	
Tamarisk scrub	0	0.01	0.01	0	0.01	0.01	
TOTAL	0.27	0.45	0.72	0.41	0.45	0.86	

Minimization measures would also be implemented to minimize indirect impacts to Riparian/Riverine resources during construction as follows:

- (1) Use of standard Best Management Practices (BMPs) to minimize the impacts during construction;
- (2) Equipment would be stored in upland areas, outside of drainages except as required by project design (restoration, trash removal, etc.);
- (3) Source control and treatment control BMPs would be implemented to minimize the potential contaminants that are generated during construction.

Clearing and grubbing would occur outside of the avian breeding season (February 1 to August 31) unless a qualified biologist demonstrates to the satisfaction of the County that all nesting is complete through completion of a Nesting Bird Clearance Survey. A Nesting Bird Clearance Survey report shall be submitted to the County for review and approval prior to initiating clearing and grubbing during the breeding season.

No plant species on Table 6.2 of the MSHCP would be utilized on the project site (including any hydroseed mix used for interim erosion control) in order to be consistent with Section 6.1.4 of the MSHCP.



With implementation of the mitigation and minimization measures listed above, all proposed project impacts would be mitigated to below a level of significance.

Consistency with MSHCP Section 6.1.4

MSHCP Section 6.1.4 is intended to address indirect effects associated with development in proximity to the MSHCP Conservation Area. Such effects could be from lighting, invasive plant species, habitat impacts from fuel modification, and extension of manufactured slopes into the MSHCP Conservation Area. Since the project is not adjacent or in proximity to an MSHCP Conservation Area, none of these potential effects would occur. Additionally, since the project is the repair of an existing facility, no changes in indirect impacts to adjacent habitats are anticipated.

VIII. CONCLUSION

The proposed project is consistent with Section 6.1.2 of the MSHCP based on the following:

- No plant species targeted for conservation are known or expected to occur within the Riparian/Riverine habitats to be impacted.
- The proposed project has been designed to minimize impacts to Riparian/Riverine habitats while still resulting in proper scour protection for the bridge.
- The MSHCP Conservation Area would not be subject to indirect effects from the project, as no MSHCP Conservation Area occurs adjacent to it.
- Mitigation for direct impacts would occur through on-site restoration of 0.45 acre for temporary impacts (including 0.06 acre of upland habitat restoration adjacent to the riparian habitat) and acquisition of 0.41 acre of credits from the RCRCD In Lieu Fee program. This restoration and fee credits would offset losses of riparian habitat functions and values.

Based on this DBESP assessment, the proposed project is consistent with Section 6.1.2.

IX. CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

DATE: $\frac{Q}{z/14}$ SIGNED: Barry L. Jones Senior Consulting Biologist

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X. REFERENCES

- Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. The Jepson Manual: Vascular Plants of California, second edition. University of California Press, Berkeley.
- California Native Plant Society (CNPS). 2013. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society. Sacramento, California. http://www.rareplants.cnps.org.
- Dudek and Associates (Dudek). 2003. Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Final MSHCP Volume I. Prepared for County of Riverside, Transportation and Land Management Agency.
- HELIX Environmental Planning Inc. 2013. Squaw Mountain Road Bridge Repair Project. Wetland Mitigation Plan. July 24.
- Knecht, A.A. 1971. Soil Survey of Western Riverside Area, California. USDA, Soil Conservation Service, USDI, and Bureau of Indian Affairs in cooperation with UC Agriculture Experiment Station, Washington D.C. 158 pp. plus appendices and maps.
- Lichvar, R.W. 2012. The National Wetland Plant List. ERDC/CRREL TR-12-11. Hanover, NH: U.S. Army Corps of Engineers, Cold Regions Research and Engineering Laboratory. http://acwc.sdp.sirsi.net/client/search/asset:asset?t:ac=\$N/1012381
- U.S. Department of Agriculture. 2013. Official Soil Series Descriptions. Available online at http://soils.usda.gov/technical/classification/osd/index.html.

HELIX

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