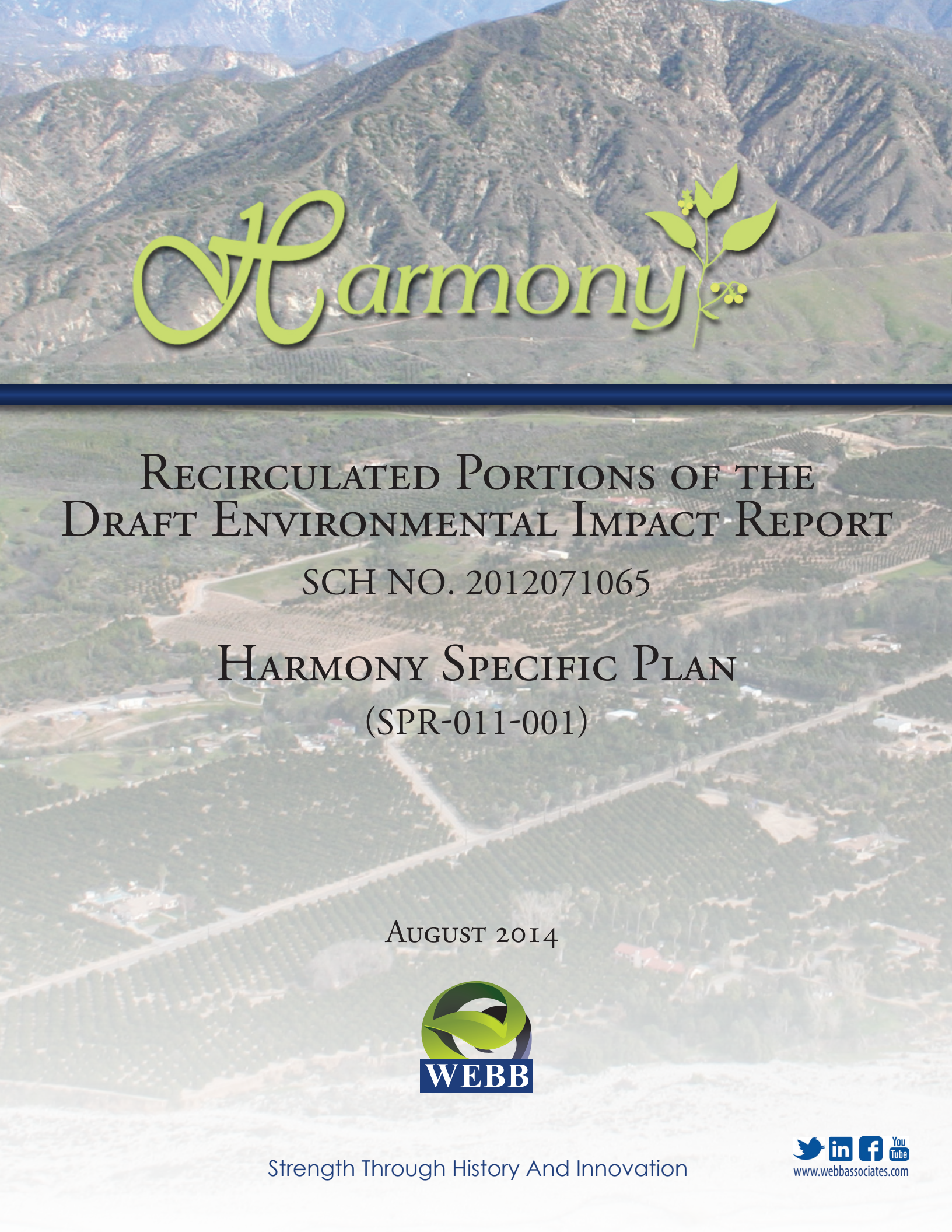

Recirculated Portions of the Draft Environmental Impact Report

SCH NO. 2012071065

Harmony Specific Plan

(SPR-011-001)

August 2014

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RECIRCULATED PORTIONS OF DRAFT ENVIRONMENTAL IMPACT REPORT

Harmony Specific Plan (SPR-011-001)

Highland, California

SCH No. 2012071065

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August 2014

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This document presents the Recirculated Portions of the Harmony Specific Plan Draft Environmental Impact Report ("DEIR"). The section numbers in this document and table of contents only include sections (of pages thereof) from the DEIR that have been updated or been added since circulation of the DEIR in March 2014. Therefore numbering of sections is not consecutive. To preserve the integrity of the page numbering from the DEIR, new text that would not fit on the original page are on pages with lettered page numbers (such as page 1-12a, 1-12b, etc.). No changes were made to individual sections of the DEIR (or pages thereof) or technical appendices that are not included in this Recirculated document and, therefore, they are not being recirculated.

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Recirculated Portions of Draft Environmental Impact Report:

Harmony Specific Plan

Introduction

During the public review period for the Draft Environmental Impact Report ("DEIR") for the Harmony Specific Plan, a number of comments were received regarding the Project's potential air quality, biological, traffic, and cumulative impacts. In response to these comments, this document contains updates and revisions to the portions of the DEIR specifically regarding:

- The final location and design of the proposed biological corridor;
- Potential impacts to least Bell's vireo;
- Potential cumulative biological impacts associated with the City's future plan to provide a new bridge across Mill Creek near the southeast corner of the Project site;
- The plant communities located on the Project site;
- Traffic impacts along San Bernardino Avenue and in the City of Redlands; and
- Air quality modeling results.

Under State CEQA Guidelines Section 15088.5(c), if a revision to an EIR is limited to a few chapters or portions of the EIR, only chapters or portions that have been modified need to be recirculated. Although other revisions are proposed to the DEIR in response to public comments received, none of these revisions represent "significant new information" that has been added since the DEIR public review ended on June 4, 2014. Accordingly, the City of Highland finds that new information and analysis regarding (1) biological, (2) air quality, and (3) traffic impacts warrant recirculation pursuant to State CEQA Guidelines Section 15088.5. Additionally, pursuant to State CEQA Guidelines Section 15088.5(f)(2), comments shall be limited to the revised chapters or portions of this Recirculated DEIR and the analysis contained herein.

The portions of the DEIR that have been modified include pages within Section 1, Executive Summary; Section 5.3, Air Quality; Section 5.4, Biological Resources; Section 5.16, Transportation/Traffic; and Section 7, Other CEQA Topics. Changes to the previously circulated DEIR are provided in strikethrough/underline text, i.e., deletions are shown with strikethrough text ~~(example text)~~ and additions are shown with underline text <u>(example text)</u>. No changes were made to individual sections of the DEIR (or pages thereof) or technical appendices that are not included in this Recirculated document.

As a result of the updates and revisions to these portions of the DEIR, the DEIR's conclusions concerning the following impacts will be changed:

- The DEIR will recognize a new potentially significant impact to least Bell's vireo. With mitigation, impacts to least Bell's vireo will remain less than significant.

- The DEIR will recognize a new significant impact with respect to operational emissions of PM-2.5.
- The DEIR will recognize an increase in the severity of the previously-identified significant impact associated with NO_X emissions.

In addition, the following new mitigation measures will be adopted as a result of the updates and revisions to these portions of the DEIR:

- **MM BIO 7**: In order reduce direct impacts to LBVI resulting from the loss of 2.4 acres of southern willow scrub/mulefat scrub, acquisition of an Individual Take Permit (ITP) from both the CFDW and USFWS shall be required prior to development within the area. As part of preparing ITPs (Section 7 Consultation under the Federal Endangered Species Act and Section 2081 under the California Endangered Species Act), biologically equivalent LBVI habitat will be preserved and managed in perpetuity, either on-site and/or within the general vicinity to offset impacts from the loss of this 2.4-acres of LBVI occupied riparian habitat. Potential suitable locations include the existing LBVI habitat along Mill Creek, south the Project site, and along the Santa Ana River, west of the Project site. Additionally, existing riparian habitats along the upper end of the Santa Ana River, west of the Project, as well as LBVI occupied habitats within Morton Canyon in the northern portion of the Project site, could be enhanced. A Habitat Management Plan(s), as well as a Property Analysis Record (PAR), shall be prepared documenting all required management actions and defining funding requirements to ensure the long-term management of all identified mitigation site(s). All sites considered for potential mitigation will be evaluated to determine if they are biologically equivalent in size and habitat quality to existing conditions:
    - Vegetation within the mitigation site will consist of riparian plants representative of southern willow scrub and mulefat scrub.
    - Each selected mitigation site(s) will be evaluated for its management ability and long-term conservation value.
    - Selected sites should be acceptable to CDFW and USFWS as part of the conservation requirements of their ITP applications.
    - Several potential mitigation areas are available and include:
        - Entrance to Morton Canyon off of the Santa Ana River
        - Morton Canyon
        - Riparian Habitats along Mill Creek at the southwest corner of the Project site
        - Riparian Habitats along the Santa Ana River west of the Project site
        - Riparian Habitats along the Santa Ana River at its confluence with Mill Creek
        - Creation of riparian areas within the flood control facilities along the Project site's southern and western boundaries.

The mitigation site shall be selected and presented to CDFW and USFWS for approval. The Project applicant shall purchase the selected mitigation site, if necessary, within one year of approval of the site by CDFW and USFWS.

- **MM AQ 5:** During construction, one of the following scenarios shall be applied:
  - A maximum of 15,700 horsepower hours per day for the off-road equipment shall be used and the off-road equipment shall have Tier 2 engines or higher.
  - A maximum of 12,100 horsepower hours per day for the off-road equipment shall be used.

The updates and revisions to the identified portions of the DEIR will not change the DEIR's significance conclusions with respect to Riversidean sage scrub, special status species, cumulative biological impacts, wildlife movement, or traffic. Additional information on these topics has been added in response to comments, and is included in the Recirculated Portions of the DEIR to offer the public an opportunity to comment on the additional information and analysis. In addition, mitigation measures **MM BIO 1**, **MM BIO-2, MM BIO 5, and MM BIO 6** have been revised based on this additional information.

The following supplemental technical reports and analyses are included with the Recirculated Portions of the DEIR:

- Air Quality Technical Report (Replaced Appendix C)
- Sensitive Habitats Analysis (New Appendix P.1 to DEIR)
- Least Bell's Vireo Survey Report (New Appendix P.2 to DEIR)
- Wildlife Corridor Analysis (New Appendix P.3 to DEIR)
- Mill Creek Bridge Analysis (New Appendix P.4 to DEIR)
- Supplemental Traffic Analysis (New Appendix Q.1 to DEIR)

The Project's Land Use Plan has changed due to the final location and increased width of the wildlife corridor. There is no net increase in overall Project unit counts; however, the following modifications to Phase V of the development occurred: the number of low density units decreased from 352 to 158; the number of medium density units increased from 0 to 194; and the net number of units in Phase V remains the same at 567. See Appendix R (Revised Land Use Plan) for more details.

The followings page numbers were changed with the Recirculated Portions of the DEIR:

1. Executive Summary

- Pages 1-8 through 1-12 and 1-30 of the DEIR were modified
- Pages 1-9a, 1-9b, and 1-12a through 1-12f were added

5.3 Air Quality

- Pages 5.3-1, 5.13-12, 5.3-14, 5.3-16, 5.3-18, 5.3-20, 5.3-21, 5.3-23, and 5.3-24 of the DEIR were modified

- Page 5.3-21a was added

5.4 Biological Resources

- Pages 5.4-1 through 5.4-5, 5.4-11, 5.4-12, 5.4-27, 5.4-28, 5.4-31, 5.4-35 through 5.4-41, and 5.4-46 through 5.4-51 of the DEIR were modified
- Text was added on pages 5.4-1a, 5.4-3a, 5.4-31a, 5.4-31b, 5.4-35a, 5.4-35b, 5.4-35c, 5.4-36a, 5.4-36b, 5.4-40a, 5.4-48a through 5.4-48d, and 5.4-50a through 5.4-50e

5.16 Transportation

- Pages 5.16-45, 5.16-104 and 5.16-106 of the DEIR were modified
- Text was added on pages 5.16-45a and 5.16-45b

7 Other CEQA Topics

- Pages 7-12, 7-13, and 7-42 of the DEIR were modified
- Text was added on page 7-12a and 7-12b

Updates and Revisions to Section 1, Executive Summary

Impact Category	Impact	Mitigation Measure	Impact After Mitigation
		during construction activities, scheduling of construction activities to minimize congestion, parking configuration to minimize traffic interference). **MM AQ 4:** During construction, the construction contractor shall implement dust control measures in accordance with SCAQMD Rule 403. The construction contractor shall include in construction specifications the fugitive dust control measures in accordance with SCAQMD Rule 403, with construction controls being at least as effective as the following, which were incorporated in the construction emissions estimates: • Watering active construction areas at least twice daily to minimize fugitive dust emissions;[1] • Maintaining soil stabilization of inactive construction areas with exposed soil via water, non-toxic soil stabilizers, or replaced vegetation; • Covering all haul trucks or maintaining at least six inches of freeboard • Suspending earthmoving operations or increasing watering to meet Rule 403 criteria if winds exceed 25 mph; • Minimizing track-out emissions using the allowable methods; and, • Limiting vehicle speeds to 15 miles per hour or less in staging areas and on haul roads. **MM AQ 5:** During construction, one of the following scenarios shall be applied: • A maximum of 15,700 horsepower hours per day for the off-road equipment shall be used and the off-road equipment shall have Tier 2 engines or higher. • A maximum of 12,100 horsepower hours per day for the off-road equipment shall be used.	

[1] Note that the control efficiency of watering is dependent on numerous variables such as soil/ground conditions, temperature, and vehicle travel specifics. For unpaved roads, increased frequency and/or water amounts are expected to improve the control efficiency.

Impact Category	Impact	Mitigation Measure	Impact After Mitigation
	The proposed Project has the potential to result in a cumulatively considerable net increase in criteria pollutant emissions for which the region is non-attainment.	See **MM AQ 1** through **MM AQ 5 ~~4~~**, above.	Significant and Unavoidable. A Statement of Overriding Considerations is required prior to Project approval.
	The proposed Project has the potential to expose sensitive to substantial pollutant concentrations.	See **MM AQ 1** through **MM AQ 5 ~~4~~**, above.	Significant and Unavoidable. A Statement of Overriding Considerations is required prior to Project approval.
	The proposed Project would not create objectionable odors that would affect a substantial number of people.	No mitigation is required.	Less than significant.
Biological Resources	The proposed Project has the potential to result in a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service.	**MM BIO 1:** Several areas with sensitive habitats on the Project site will not be developed: 43.8 ~~31.8~~ acres of the RAFSS habitat supporting Santa Ana River Woollystar along the site's western boundary as well as the riparian habitats in Morton Canyon. Access to these areas will be restricted. An appropriate barrier/fence shall be installed to prevent unauthorized use. Educational signage shall also be posted to educate residents of the sensitivity of biological resources in each area, as well as the presence of a federal and state mandated conservation area to the west of the Project site, including the woolly star preserve area and the pending Upper Santa Ana River Wash and HCP. **MM BIO 2**: In order to reduce potential direct impacts to SBKR from the loss of 61.0 acres of RAFSS habitat and indirect impacts from the release of storm water into the RAFSS habitat, the loss of ~~RAFSS habitat~~ 24.3 acres intermediate RAFSS shall be mitigated at a 2:1 ratio and the loss of 36.7 acres of Mature RAFSS shall be mitigated at a 1:1 ratio through the restoration and enhancement of the 86.4 acres of low quality RAFSS habitat to high quality RAFSS habitat to the southeast of the Project boundary. The restoration and enhancement of the 86.4 acres of low quality, primarily intermediate RAFSS habitat between the Project site and Mill Creek will provide a biologically superior preservation alternative to the existing mature RAFSS habitat on-site. The restoration and enhancement of RAFSS habitat will be detailed in a Habitat Mitigation and Monitoring Plan (HMMP) that will be prepared as part of the regulatory permitting process for impacts to jurisdictional waters, as well as part of an Individual Take Permit (ITP) needed to address the loss of SBKR critical habitat through a	Less than significant.

Impact Category	Impact	Mitigation Measure	Impact After Mitigation
		Section 7 Consultation between the USACE and USFWS. The HMMP and ITP will include a management plan for all RAFSS habitat found along the Harmony project site's southern boundary and will be coordinated with the conservation planning efforts currently being finalized under the Upper Santa Ana River Wash Plan HCP. ~~by one or a combination of the following subject to USFWS and CDFW approval:~~ • ~~purchase of RAFSS habitat at a 2:1 ratio from the Cajon Creek Conservation Bank;~~ • ~~payment into the Riverside-Corona Resource Conservation District in-lieu fee program established for RAFSS habitat at a 2:1 ratio;~~ • ~~restoration and long-term management of onsite of mature RAFSS habitat to intermediate habitat at a 2:1 ratio;~~ • ~~and/or restoration and long-term management of off-site low quality RAFSS immediate south of the proposed storm drain facility to high quality RAFSS habitat at a 2:1 ratio.~~ **MM BIO 3:** Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Wildlife Code. If ground-disturbing activities or removal of any trees, shrubs, or any other potential nesting habitat are scheduled within the avian nesting season (nesting season generally extend from February 1 - August 31, but can vary from year to year based upon seasonal weather conditions), a pre-construction clearance survey for nesting birds, should be conducted within 7 days prior to any ground disturbing activities. This will ensure that no nesting birds will be disturbed during construction. **MM BIO 7**: In order reduce direct impacts to LBVI resulting from the loss of 2.4 acres of southern willow scrub/mulefat scrub, acquisition of an Individual Take Permit (ITP) from both the CFDW and USFWS shall be required prior to development within the area. As part of preparing ITPs (Section 7 Consultation under the Federal Endangered Species Act and Section 2081 under the California Endangered Species Act), biologically equivalent LBVI habitat will be preserved and managed in perpetuity, either on-site and/or within the general vicinity to offset impacts from the loss of this 2.4-acres of LBVI occupied riparian habitat. Potential suitable locations include the existing LBVI habitat	

Impact Category	Impact	Mitigation Measure	Impact After Mitigation
		along Mill Creek, south the Project site, and along the Santa Ana River, west of the Project site. Additionally, existing riparian habitats along the upper end of the Santa Ana River, west of the Project, as well as LBVI occupied habitats within Morton Canyon in the northern portion of the Project site, could be enhanced. A Habitat Management Plan(s), as well as a Property Analysis Record (PAR), shall be prepared documenting all required management actions and defining funding requirements to ensure the long-term management of all identified mitigation site(s). All sites considered for potential mitigation will be evaluated to determine if they are biologically equivalent in size and habitat quality to existing conditions: • Vegetation within the mitigation site will consist of riparian plants representative of southern willow scrub and mulefat scrub. • Each selected mitigation site(s) will be evaluated for its management ability and long-term conservation value. • Selected sites should be acceptable to CDFW and USFWS as part of the conservation requirements of their ITP applications. • Several potential mitigation areas are available and include: o Entrance to Morton Canyon off of the Santa Ana River o Morton Canyon o Riparian Habitats along Mill Creek at the southwest corner of the Project site o Riparian Habitats along the Santa Ana River west of the Project site o Riparian Habitats along the Santa Ana River at its confluence with Mill Creek o Creation of riparian areas within the flood control facilities along the Project site's southern and western	

Impact Category	Impact	Mitigation Measure	Impact After Mitigation
		boundaries. The mitigation site shall be selected and presented to CDFW and USFWS for approval prior to disturbance within this area. The Project applicant shall purchase the selected mitigation site, if necessary, within one year of approval of the site by CDFW and USFWS.	
	The proposed Project has the potential to result in a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.	**MM BIO 4**: In order to reduce impacts from the loss of approximately 1.29 acres of waters of the US to less than significant levels this loss shall be mitigated by one or a combination of the following subject to USACE approval: • purchase of mitigation credits at a 2:1 ratio, or the USACE agreed upon ratio, from an USACE approved Mitigation Bank; • payment into the Riverside-Corona Resource Conservation District in-lieu fee program established for the loss of waters of the US at the agreed upon ratio; • and/or the enhancement, conservation, and long-term management of onsite waters of the US at the agreed upon ratio. If restoration and enhancement of onsite ephemeral stream habitat is a selected option, implementation shall be detailed in a Habitat Mitigation and Monitoring Plan (HMMP) that shall be prepared, reviewed and approved by USACE as part of the 404 permitting process. **MM BIO 5**: In order to reduce impacts from the loss of approximately 31.48 acres of streambeds as well as the ~~88.8 acres of RAFSS habitat (38.1 acres of intermediate RAFSS habitat an d 50.7 acres of mature RAFSS habitat)~~ 14.3 acres of Southern Willow Scrub/Mulefat Scrub under CDFW jurisdiction to less than significant levels, this loss shall be mitigated by one or a combination of the following subject to CDFW approval: • purchase of streambed and associated riparian habitat at a 2:1 ratio from the Cajon Creek Conservation Bank or other approved mitigation bank; • payment into the Riverside-Corona Resource Conservation District in-lieu fee program (or other approved in-lieu fee program) established for the loss of streambed and associated riparian	Less than significant

Impact Category	Impact	Mitigation Measure	Impact After Mitigation
		vegetation at a 2:1 ratio; • restoration and long-term management of onsite streambeds and associated riparian vegetation at a 2:1 ratio; • and/or restoration and enhancement ~~long-term management~~ of equivalent riparian ~~off-site low quality streambed and associated riparian vegetation to high quality habitat~~ at a 2:1 ratio. If restoration and enhancement of riparian habitat is a selected option, implementation shall be detailed in an HMMP that shall be prepared, reviewed, and approved by CDFW as part of the Streambed Alteration Agreement process.	
	The proposed Project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	No mitigation required.	Less than significant
	The proposed Project has the potential to 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.	**MM BIO 1**, above. **MM BIO 6**: In order to reduce Project impacts to wildlife movement, the proposed wildlife movement corridor (selected in cooperation with local wildlife biologists) shall be developed in the eastern portion of the Project site that shall meet the following requirements: • Provide connectivity between the San Bernardino Mountains and Crafton Hills, two areas of similar and naturally occurring habitats that were once contiguous wildlife habitat prior to human development in the region, including Highway 38; • Provides needed avenue for genetic interchange, both for wildlife, as well as plant species; • Identifies a conduit or wildlife movement corridor in response to environmental changes and natural disasters; and • Provides a source of individuals of a species to re-colonize an	Less than significant

Impact Category	Impact	Mitigation Measure	Impact After Mitigation
		area such as the Crafton Hills if they may become extirpated in that area. The size and shape of a corridor can directly impact the effectiveness of the corridor for wildlife movement. Although there are no hard guidelines for corridor design, the following performance standards were used to select the locations and shall continue to be used to finalize its design, as well as to implement an effective monitoring/adaptive management program to ensure its long-term suitability for providing movement opportunities and connectivity for wildlife between the San Bernardino Mountains and the Crafton Hills. These performance standards follow the six-step checklist outlined by Beier and Loe (1992): 1. The width of wildlife corridors should be based on an assessment of existing site conditions, use of the site by targeted wildlife species, a review of existing scientific literature on wildlife corridor and coordination with local experts on wildlife movement. A comprehensive review of the scientific literature on wildlife corridors by the state of Oregon's Metro Sustaining Center (2010) found that effective movement corridor widths can range in width from a few feet to over a thousand feet. They found that several studies on general wildlife corridors recommend that corridors be at least 328 feet (100 meters) wide to provide opportunity for most wildlife movement and habitat functions. Carnivores and large mammals tend to require wider corridors. Therefore, the proposed wildlife corridor will be 900 feet at a minimum up to a maximum of 1,800 feet along the eastern boundary, which is wide enough to accommodate the likely users of the wildlife corridor, including mule deer, mountain lions, bobcats, American badger, and small mammals. 2. Habitat quality is an important corridor attribute and can be crucial in contributing to the corridor's functionality. The proposed corridor is currently vegetated with a naturally	

Impact Category	Impact	Mitigation Measure	Impact After Mitigation
		occurring Riversidean Sage Scrub plant community that provides plant species similar to those areas in the San Bernardino Mountains and in the Crafton Hills being connected by the corridor. This vegetative structure will be maintained so that it continues to attract the target species and encourage their movement through the corridor. 3. The target species that require movement opportunities between the San Bernardino Mountains and Crafton Hills include mule deer, mountain lion, bobcat, American badger, and black-tailed jackrabbit. The proposed wildlife corridor has been designed for the large mammal species, mountain lion and mule deer, and will be sufficient in width and location to support the demand for wildlife movement for the above species between the San Bernardino Mountains and the Crafton Hills. Currently, various impediments to wildlife movement exist on the Project site, including dirt roads, off-highway vehicle uses, lack of cover, lack of water, and ongoing site disturbances. The dedicated wildlife corridor will improve wildlife movement opportunities as compared to existing conditions by reducing most human interferences and providing ample cover for traveling animals. 4. The corridor location and design will ensure that: a. Large mammals are expected to be able to encounter and use the corridor. The entrance to the proposed corridor is a continuation of the existing corridor from the San Bernardino Mountains already in use. With the preservation of the existing topography and the plant communities, wildlife movement between the San Bernardino Mountains and the Crafton Hills will not be interrupted. b. The habitat within the corridor will remain in its natural condition except some areas that will need to be re-	

Impact Category	Impact	Mitigation Measure	Impact After Mitigation
		vegetated after initial grading. The site will continue to attract the target species and encourage their movement through the corridor. c. The large width, up to 1,800 feet, of the corridor, as well as the preservation of the natural habitats within the corridor will continue to provide sufficient shelter, food and water for wildlife to move through the corridor. Enhancement and restoration measures such as re-vegetation to restore baseline conditions, documented at the opening of the corridor, following flood events and wild fires will be included in a long-term management plan. d. The corridor has been designed to reduce impediments to the use of the corridor such as human activity, road crossings, fencing, and stream channelization. Two existing roads have existed for decades within the eastern portion of the Project site and have not impeded wildlife movement through the area. These two existing at grade roads will be included in the proposed corridor in order to provide access to residences east of the Project site. The long-term management plan will include guidelines for maintaining these two at grade roads while continuing to recognize the movement of wildlife through the area. 5. Long-term management guidelines will be specified and will include: a. Maximize land uses adjacent to the corridor that reduce human impacts to the corridor; b. Do not allow housing or other impacts to Project into the corridor to form impediments to movement and increase harmful edge effects;	

Impact Category	Impact	Mitigation Measure	Impact After Mitigation
		c. Strict lighting restrictions for houses adjacent to the corridor to prevent light pollution into the corridor will be imposed. Lights must be directed downward and away from the corridor; d. No domestic pets, off-road vehicles, or recreational activities will be allowed in the corridor; e. No feeding of wildlife animals will be allowed; and f. Landowners adjacent to the corridor will be educated about the presence of the wildlife corridor and restrictions regarding the use of the area. 6. A monitoring program will be included in the long-term management plan that will ensure the proposed corridor is providing suitable habitat and that it is functioning and providing wildlife movement opportunities. The monitoring program will assess animal use of the corridor both before, during and post construction of the Project for a period not to exceed five years after Project completion. The monitoring program will be funded for five years by the Project Applicant. The monitoring program shall be overseen by the City and an Advisory Committee of 5, including a City designee, and Applicant designee, the Project biologist, and additional members mutually selected by the City and Applicant. The Advisory Committee shall submit annuals reports to the City. If a majority of the Advisory Committee members determine that the wildlife corridor is not functioning in accordance with the performance standards listed below, the Advisory Committee may require the implementation of adaptive management provisions, which shall be selected by a majority of the Advisory Committee members, in consultation with the City and the Project Applicant. Biological monitoring will ensure consistency and will be	

Impact Category	Impact	Mitigation Measure	Impact After Mitigation
		measured against the following performance standards: ▪ Exotic vegetation within the wildlife corridor will not be allowed to exceed 30 percent as measured against the baseline conditions documented at the opening of the corridor. ▪ The overall plant structure and diversity within the corridor will be maintained at baseline levels and should not deviate from baseline conditions by over 20 percent. ▪ Wildlife entry into corridor and movement through the corridor should continue or exceed baseline levels as measured against the baseline conditions documented at the opening of the corridor. A drop of 20 percent in use of the corridor should be investigated to explain the observed decrease and/or to develop corrective actions for impacts that occur within the property. ▪ Openness of vegetation in the corridor should be maintained at baseline levels. An increase or decrease in plant density that exceeds 10 percent from baseline levels will be investigated to explain the observed change in density/openness and to determine if corrective measures are needed. ▪ External factors such as lighting and the use of the two existing at grade road crossings that must remain in place to provide access for residences to the east will be assessed annually against movement levels through the corridor to determine if lighting and the use of the existing at grade roads are having an adverse effect on wildlife use of the corridor. A decrease of 20 percent will be investigated to explain the decrease and/or to develop corrective actions that can be feasibly implemented.	

Impact Category	Impact	Mitigation Measure	Impact After Mitigation
		~~In order to reduce impacts from the Project on existing Crafton Hills Linkage wildlife corridor a wildlife movement corridor shall be developed in the eastern portion of the Project site that shall meet the following requirements:~~ ~~• Provide connectivity between the San Bernardino Mountains and Crafton Hills, two areas of naturally occurring habitats that were once contiguous wildlife habitat prior to human development in the region, including Highway 38;~~ ~~• Provide a needed avenue for genetic interchange, both for wildlife, as well as plant species;~~ ~~• Identify a conduit or wildlife movement corridor in response to environmental changes and natural disasters; and~~ ~~• Allow individuals of a species to re-colonize an area from which they may become extirpated.~~ ~~The following performance standards shall be used to identify the wildlife corridor alignment and shall continue to be used to determine its ongoing suitability for providing movement opportunities and connectivity for wildlife between the San Bernardino Mountains and the Crafton Hills:~~ ~~1. A wildlife corridor at least 300 feet wide shall be established and vegetated with plant species similar to those areas in the San Bernardino Mountains and in the Crafton Hills being connected by the corridor;~~ ~~2. Target species shall be identified that require movement opportunities between the San Bernardino Mountains and Crafton Hills;~~ ~~3. The movement and dispersal patterns, including seasonal migration patterns, for each target species or species of interest can be shown to be routinely migrating between the San Bernardino Mountains and Crafton Hills;~~ ~~4. The corridor shall be designed to accommodate movement by large mammals, in particular, mule deer, mountain lion, bobcat and American badgers;~~ ~~o Large mammals can expected to be able to encounter and use~~	

Impact Category	Impact	Mitigation Measure	Impact After Mitigation
		~~the corridor;~~ ~~o The habitat within the corridor shall be conducive to attracting the identified large mammals and to encourage movement through the corridor;~~ ~~o The corridor shall be created to provide sufficient shelter, food and water for wildlife to move through it; and~~ ~~o The corridor shall be designed to avoid, where feasible, impediments to the use of the corridor such as human activity, road crossings, fencing, and stream channelization. Two existing road crossing will be maintained to provide access from the Project site to residential developments to the east.~~ ~~5. Specific management guidelines shall be specified that include:~~ ~~o Restrictions on land uses within and adjacent to the corridor;~~ ~~o Domestic pets, off-road vehicles, lighting, and recreational activities will be not permitted within the wildlife corridor; and~~ ~~o Two future road crossings will be allowed at grade to provide access to residences to the east of the Project site, however, the location and design shall incorporate measures to minimize impacts to wildlife use of the corridor.~~ ~~6. A monitoring program shall be included to ensure the selected/implemented corridor is functioning and providing wildlife movement opportunities. The monitoring program shall assess animal use of the corridor both before and post construction of the Project for a period not to exceed five years after Project completion and will be managed by the City of Highland.~~	
	The proposed Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	No mitigation required.	Less than significant
	The proposed Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat	No mitigation required.	Less than significant

Impact Category	Impact	Mitigation Measure	Impact After Mitigation
		17. Bryant Street and SR-38 - construct a traffic signal. Construct an exclusive eastbound right-turn lane. The existing shared through/right lane will become a through lane. 18. Bryant Street and Oak Glen Road - construct an exclusive southbound right-turn lane and add a right-turn overlap phase. The existing shared through/right lane will become a through lane. 19. Sand Canyon Road, 14th Street, and Yucaipa Boulevard - convert northbound/southbound split phase to protected phase. Construct an exclusive northbound left-turn lane and restripe the northbound shared left/through lane to a through lane. Restripe the southbound shared left/through lane to a through lane. Construct an exclusive westbound right-turn lane and add a right-turn overlap phase. The existing shared through/right lane will become a through lane. 20. I-10 Eastbound Eureka Street Off-Ramp – construct a second off-ramp lane from the ramp diverge area. 21. I-10 Eastbound University Street Off-Ramp – construct a second off-ramp lane from the ramp diverge area. 22. I-10 Westbound Live Oak Canyon Road On-Ramp – construct a second on-ramp lane up to the ramp merge area. 23. <u>SR-210 Westbound Ramps/San Bernardino Avenue – restriping of the dedicated eastbound right turn lane to a shared eastbound through-right turn lane and the addition of a westbound through lane.</u> 24. <u>Orange Street / Pioneer Avenue – construct a traffic signal.</u> Furthermore, the City of Highland will require the Project to pay development impact fees to mitigate Project-related traffic at locations within the City not analyzed specifically in the Project-specific Traffic Impact Analysis, but are analyzed in the City of Highland's development impact fee program. The amount of the development impact fee will be reduced based on the City's established development impact fee credit policy.	

Updates and Revisions to Section 5.3, Air Quality

5.3 Air Quality

This section evaluates the Project's impacts related to air quality in the Project area by presenting a quantitative analysis of criteria air pollutant emissions that are expected to be generated during construction and operation.

The following discussion of potential impacts is based on the *Air Quality Technical Report, Harmony Specific Plan, Highland, California*, prepared by ENVIRON, ~~January 13,~~ August 2014 (referenced as AQTR and cited as ENVIRON(a)). This report is contained in Appendix C of this DEIR. The report was conducted within the context of the California Environmental Quality Act (CEQA; California Public Resources Code 21000 *et seq.*), and is based on the methodology of the South Coast Air Quality Management District (SCAQMD). As recommended by SCAQMD, the California Emissions Estimator Model (CalEEMod™) version ~~2011.1.1~~ 2013.2.2 computer program was used to quantify Project-related emissions, and AERMOD, a modeling system developed by the American Meteorological Society/United States Environmental Protection Agency's Regulatory Model Improvement Committee, was used to evaluate the air dispersion of pollutants.

5.3.1 Setting

5.3.1.1 Physical Setting

The proposed Project is located within the South Coast Air Basin (Basin), which is under the jurisdiction of the SCAQMD. The Basin consists of Orange County, coastal and mountain portions of Los Angeles County, as well as Riverside and San Bernardino Counties (SCAQMD 1993, p. 2-1). Regional and local air quality within the Basin is affected by topography, atmospheric inversions, and dominant onshore flows. Topographic features such as the San Gabriel, San Bernardino, and San Jacinto Mountains form natural horizontal barriers to the dispersion of air contaminants. The presence of atmospheric inversions limits the vertical dispersion of air pollutants. With an inversion, the temperature initially follows a normal pattern of decreasing temperature with increasing altitude; however, at some elevations, the trend reverses and temperature begins to increase as altitude increases. This transition to increasing temperature establishes the effective mixing height of the atmosphere and acts as a barrier to vertical dispersion of pollutants. (SCAQMD 1993, p. A8-2)

Dominant onshore flow provides the driving mechanism for both air pollution transport and pollutant dispersion. Air pollution generated in coastal areas is transported east to inland receptors by the onshore flow during the daytime until a natural barrier (the mountains) is confronted, limiting the horizontal dispersion of pollutants. The result is a gradual degradation of air quality from coastal areas to inland areas, which is most evident with the photochemical pollutants such as ozone formed under reactions with sunlight. (SCAQMD 1993, pp. A8-1 to A8-2)

5.3.1.2 Climate

Terrain and geographical location determine climate in the Basin. The Project site lies within the terrain southeast of the San Gabriel Mountains, south and west of the San Bernardino Mountains, and northeast of the Santa Ana Mountains. The climate in the Basin is typical of Southern California's Mediterranean climate, which is characterized by dry, warm summers and mild winters. Winters

during construction as a result of operation of personal vehicles by construction workers, asphalt degassing, and architectural coating (painting) operations.

Short-term emissions were evaluated using the CalEEMod™ version ~~2011.1.1~~ 2013.2.2 computer program, unless otherwise noted.

The Project area will be developed in five Project phases over a multi-year time frame (see **Figure 3-11 – Conceptual Phasing Plan**). Project phases 4 and 5 will be overlapped in timeframe, thus, for purposes of the air quality analysis, phases 4 and 5 were combined into one construction phase. The construction is anticipated to start in 2015 and is anticipated to be completed in 2027, but the analysis is conservatively based on construction between 2014 and 2023. (ENVIRON(a), p. 7)

The major construction activities evaluated within each phase of the air quality analysis for the Project are as follows:

- Site preparation: Involves clearing vegetation (grubbing and tree/stump removal) and stones prior to grading.
- Grading: Involves the cut and fill of land to ensure the proper base and slope for the construction foundation.
- Building construction: Involves the construction of structures and buildings.
- Architectural coating: Involves the application of coatings to both the interior and exterior of buildings or structures.
- Paving: Involves the laying of concrete or asphalt such as in parking lots or roads.

The specific construction schedule assumptions for each phase are provided in **Table 5.3-C – Construction Schedule**. The construction equipment mix assumed for each phase are provided in **Table 5.3-D – Construction Equipment Mix**, which were assumed to be identical in each Phase of development. The analysis assumed no soil import or export during grading activities, but evaluated fugitive dust emissions from on-site earth movement, which is shown in **Table 5.3-E – Excavation and Grading Volumes**. The emissions calculations are intended to estimate maximum daily emissions. Each piece of equipment was assumed to be operated for 10 hours a day, six days a week during a given activity. It should be noted that while the exact construction schedule and equipment mix may vary between the two overlay options, the maximum daily emissions are not expected to be higher than that estimated, given the conservative assumptions included in this analysis. (ENVIRON(a), p. 7)

Table 5.3-C – Construction Schedule

Project Phase	Construction Activity	Start Date	End Date	Total Work Days
Phase 1	Site Preparation	8/2/14	9/15/2014	38
	Grading	9/16/2014	6/15/2015	234
	Trenching	2/15/2015	7/15/2015	129
	Paving	3/15/2015	9/15/2015	158

Table 5.3-E – Excavation and Grading Volumes

Project Phase	Mass Excavation	Corrective Grading	Total Volume of Earth Moved	Total Altered Areas (Acres)
	Cubic yards			
1	3,500,000	2,400,000	5,900,000	366
2	3,300,000	2,000,000	5,300,000	329
3	1,700,000	800,000	2,500,000	155
4/5	3,000,000	2,600,000	5,600,000	347
Total	**11,500,000**	**7,800,000**	**19,300,000**	**1,196**

Source: ENVIRON(a), Table 7.

Table 5.3-F – Summary of Construction Emissions, shows the Project's maximum daily construction emissions for each year of construction, based on the assumptions outlined above and include VOC off-gassing emissions associated with architectural coatings and asphalt paving as well as the on-road construction trip emissions associated with vehicle exhaust, and evaporative and dust emissions as estimated by CalEEMod™. For the results of individual activities, please see Tables 9 through 11 of the AQTR in Appendix C.

Table 5.3-F – Summary of Construction Emissions

Year	Maximum Daily Emissions (lb/day)					
	VOC	NO_X	CO	SO_2	PM-10	PM-2.5
SCAQMD Daily Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
2014	30 ~~34~~	364 ~~279~~	241 ~~142~~	0	33 ~~28~~	24 ~~20~~
2015	36 ~~39~~	388 ~~283~~	291 ~~189~~	0	30 ~~28~~	21 ~~16~~
2016	101 ~~100~~	59 ~~48~~	87 ~~69~~	0	11 ~~13~~	5 ~~3~~
2017	27 ~~29~~	321 ~~222~~	216 ~~126~~	0	30 ~~26~~	21 ~~18~~
2018	47 ~~49~~	77 ~~66~~	106 ~~90~~	0	14 ~~17~~	6 ~~4~~
2019	45 ~~47~~	64 ~~57~~	97 ~~83~~	0	13 ~~16~~	6 ~~4~~
2020	20 ~~24~~	226 ~~169~~	165 ~~111~~	0	26 ~~23~~	17 ~~15~~
2021	63 ~~68~~	218 ~~168~~	205 ~~156~~	0	22 ~~23~~	13 ~~10~~
2022	101 ~~108~~	230 ~~190~~	236 ~~181~~	0	35 ~~36~~	20 ~~17~~
Maximum	**101 ~~108~~**	**388 ~~283~~**	**291 ~~189~~**	**0**	**35 ~~36~~**	**24 ~~20~~**
Exceeds Threshold?	**Yes**	**Yes**	**No**	**No**	**No**	**No**

Source: ENVIRON(a), Table 12.

Note: PM-10 and PM-2.5 emissions are controlled by watering the construction site twice daily resulting in a 50% reduction.

As shown in **Table 5.3-F**, above, criteria pollutant emissions from construction of the Project do not exceed the thresholds for CO, SO_2, PM-10, or PM-2.5 in any year. Project construction emissions do exceed thresholds for VOC and NO_X during multiple years. Specifically, the VOC and NO_X emissions are estimated to exceed the threshold in two of nine years and six of nine years, respectively.

Long-Term Operation Emissions

Long-term operational emissions occur after construction and include area sources, energy usage, and mobile sources. The criteria pollutants from these sources were estimated using CalEEMod™.

Table 5.3-G – Summary of Operational Emissions

Source	Maximum Daily Emissions (lb/day)					
	VOC	NO_X	CO	SO_2	PM-10	PM-2.5
SCAQMD Daily Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Project with NC Overlay						
Area	149	37	300 ~~304~~	0	4	4
Energy	3 ~~4~~	28 ~~34~~	12 ~~15~~	0	2 ~~3~~	2 ~~3~~
Traffic	122 ~~196~~	344 ~~504~~	1,555 ~~1,724~~	6	376 ~~616~~	105 ~~32~~
Total	**274 ~~349~~**	**409 ~~575~~**	**1,868 ~~2,042~~**	**6**	**383 ~~623~~**	**112 ~~39~~**
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes ~~No~~**
Project without NC Overlay						
Area	149	38	315 ~~318~~	0	4	4
Energy	3 ~~4~~	29 ~~35~~	13 ~~15~~	0	2 ~~3~~	2 ~~3~~
Traffic	111 ~~182~~	326 ~~466~~	1,468 ~~1,610~~	5	361 ~~579~~	101 ~~30~~
Total	**264 ~~335~~**	**394 ~~540~~**	**1,795 ~~1,943~~**	**6**	**368 ~~587~~**	**108 37**
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**

Source: ENVIRON(a), Table 27, and 28.

Note: Emissions reported as zero are considered below the reporting level of CalEEMod™ and not necessarily equal to zero.

The estimated emissions show that the regional operational maximum daily emissions for both the Project "with" and "without" NC overlay operations are less than the SCAQMD mass daily significance thresholds for SO_2 ~~and PM-2.5~~, and greater than the SCAQMD mass daily significance thresholds for VOC, NO_X, CO, ~~and~~ PM-10, and PM-2.5. The emissions from Project "without" NC overlay were estimated to be slightly lower than the emissions from Project "with" NC overlay. The primary source of the operational emissions is the traffic mobile sources. The emissions from traffic mobile sources are expected to gradually decline in the future as cars become more fuel efficient due to existing regulations (i.e., Pavley Standard and the Advanced Clean Cars program).

Localized Emissions Analysis

SCAQMD also recommends the evaluation of localized NO_2, CO, PM-10, and PM-2.5 impacts as a result of construction and operational activities to sensitive receptors in the immediate vicinity of a project. SCAQMD identifies the following uses as sensitive receptors: long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, child care centers, and athletic facilities (SCAQMD 1993, p. 1-5). The only sensitive receptors identified within ¼ mile of the Project site were residences (ENVIRON(a), p. 21).

SCAQMD staff developed methodology to assist lead agencies in analyzing localized air quality impact from a proposed project. According to SCAQMD methodology, a localized analysis would only apply to the operational phase of a project if the project includes stationary sources (e.g., flares and turbines) and/ on-site mobile equipment. Since the Project does not include such uses during operation, the

- Coarse Grid 250 m x 250 m from 500 m to 1000 m from the fence line
- Sensitive Receptors are discrete receptors placed in up to ¼-mile from the fence line

Criteria pollutant impacts were evaluated at receptors where a person can be situated for an hour or longer at a time, consistent with SCAQMD guidance. Receptor heights were assumed to be one meter based on currently available documentation from SCAQMD and Office of Environmental Health Hazard Assessment (OEHHA). (ENVIRON(a), p. 21~~0~~) **Table 5.3-~~H~~I ~~–~~ – Construction Air Dispersion Modeling Results**, shows the results of the localized analysis.

Table 5.3-H – Construction Air Dispersion Modeling Results

Pollutant	Averaging Time	Maximum Project Emissions ($\mu g/m^3$)	Background Pollutant Concentration ($\mu g/m^3$)[1]	Maximum Project + Background Concentration ($\mu g/m^3$)	SCAQMD Threshold ($\mu g/m^3$)[2]	Exceeds threshold?
NO_2[3]	1-hour	75 ~~50~~	207	281 ~~257~~	339	No
	Annual	1.8 ~~20~~	44	46 ~~47~~	57	No
CO	1-hour	76 ~~43~~	3,434	3,509 ~~3,476~~	23,000	No
	8-hour	26 ~~15~~	2,175	2,201 ~~2,189~~	10,000	No
PM-10	24-hour	3.75 ~~3.07~~	N/A	N/A	10.4	No
	Annual	0.77 ~~0.61~~	N/A	N/A	1.0	No
PM-2.5	24-hour	2.24 ~~1.81~~	N/A	N/A	10.4	No

Source: ENVIRON(a), Table 29

Notes: [1] Background concentrations based on averaging results for years 2008-2010.

[2] SCAQMD Air Quality Significance Thresholds for ambient air quality obtained from http://www.aqmd.gov/ceqa/handbook/signthres.pdf

[3] The NO_2/NO_X conversion rate assumed to be 75%.

As shown in **Table 5.3-H**, air quality impacts from construction will not exceed SCAQMD ambient air quality significance thresholds. Air quality impacts from construction will exceed ~~also be below~~ the federal 1-hour NO_2 (0.100 ppm or 188 $\mu g/m^3$) standard using the 98th percentile background value as required for this standard. It should be noted that while the exact construction schedule and equipment mix may vary from the current analysis, the maximum daily emissions are not expected to be higher than that estimated, as construction emissions are based on conservative assumptions. Further, the construction modeling results are based on the combination of maximum emissions that may occur with the worst-case meteorological conditions. Thus, while it is possible that these estimates of ambient air quality concentrations may occur, these are highly conservatively estimates, and thus, they may never occur. (ENVIRON(a), p. 22~~1~~)

NO_X, CO, ~~and~~ PM-10, and PM-2.5. The primary source of the operational emissions is the traffic mobile sources.

Based on the localized analysis of the proposed Project, the short-term construction of the Project will not result in localized air quality impacts to sensitive receptors in the Project vicinity using the SCAQMD thresholds. However, the construction emissions would exceed the federal 1-hour NO_2 standard. It should be noted that the construction emissions are based on conservative assumptions to represent the maximum level of construction activity that may occur on the Project site, and also, the construction modeling results is based on the combination of maximum emissions that may occur with the worst-case meteorological conditions. Thus, while it is possible that these estimates of ambient air quality concentrations may occur, these are highly conservative estimates, and thus, they may never occur. The Project does not contain any uses that would require a localized analysis from operations. Additionally, the proposed Project will not form any CO hot spots in the Project area.

Therefore, the Project will violate an air quality standard or contribute substantially to an existing or projected air quality violation, and impacts are considered to **significant and unavoidable without implementation of mitigation measures**. Mitigation measures **MM AQ 1** through **MM AQ 5 4** will be implemented to reduce air quality impacts. Please see Section 5.3.7, below, for a discussion of impacts after mitigation measures have been incorporated.

Threshold: *Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?*

As previously stated in Section 5.3.3.1 (Related Regulations, Criteria Air Pollutants), the portion of the Basin within which the Project site is located is designated as a non-attainment area for NO_2 under state standards, and for ozone, PM-10, and PM-2.5 under both state and federal standards.

SCAQMD considers the thresholds for project-specific impacts and cumulative impacts to be the same.[10] Therefore, projects that exceed project-specific significance thresholds are considered by SCAQMD to be cumulatively considerable. The SCAQMD mass daily significance thresholds for VOC and NO_X are exceeded during construction. Thus, the Project would have a cumulatively considerable increase in emissions due to construction-related VOC and NO_X. In terms of localized air quality impacts, construction of the Project would not have a cumulatively considerable impact due to criteria pollutant emissions. However, the construction emissions would exceed the federal 1-hour NO_2 standard. For the Project "with NC overlay" and "without NC overlay", operational emissions would exceed the SCAQMD's mass daily threshold for VOC, NO_X, CO, ~~and~~ PM-10, and PM-2.5 emissions. Thus, the Project would have a cumulatively considerable increase in emissions due to operational-related VOC, NO_X, CO, ~~and~~ PM-10, and PM-2.5 emissions.

Therefore, the Project is considered to have a cumulatively considerable net increase in non-attainment pollutants in the region under both state and federal standards and the impact is considered **significant and unavoidable without the implementation of mitigation measures**. Mitigation measures **MM AQ 1**

[10] The only exception is the hazard index significance threshold for toxic air contaminants.

through **MM AQ 5 ~~4~~** will be implemented to reduce air quality impacts. Please see Section 5.3.7, below, for a discussion of impacts after mitigation measures have been incorporated.

Threshold: *Would the proposed Project expose sensitive receptors to substantial pollutant concentrations?*

The proposed Project consists of a mixed-use residential and commercial specific plan. The majority of operational emissions are from mobile sources (traffic). Sensitive receptors, existing residences in this case, and the analysis of Project-related impacts upon those in the Project vicinity were evaluated in the threshold above.

As previously discussed and shown in **Table 5.3-~~H~~L**, above, ambient air quality impacts from construction would not exceed SCAQMD air quality significance thresholds, but the construction emissions would exceed the federal 1-hour NO_2 standard. ~~except for the annual PM-10 significance threshold~~. However, there would be no long-term exceedances from Project operations because the Project does not contain sources that require localized analysis nor would the Project result in CO hot spots.

Due to the localized ~~PM-10~~ impacts during construction exceeding the federal 1-hour NO_2 standard, impacts are considered **significant and unavoidable without the implementation of mitigation measures**. Mitigation measures **MM AQ 1** through **MM AQ 5 ~~4~~** will be implemented to reduce air quality impacts. Please see Section 5.3.7, below, for a discussion of impacts after mitigation measures have been incorporated.

Threshold: *Would the proposed Project create objectionable odors affecting a substantial number of people?*

The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source, the wind speeds and direction, and the sensitivity of the receiving location each contribute to the intensity of the impact. While offensive odors rarely cause any physical harm, they can be unpleasant and cause distress among the public and generate citizen complaints. (ENVIRON(a), p. 23)

The human nose is still the best means of determining the strength of an odor. Precise documentation of the strength and nature of an odor is generally unavailable because of the large number of gases involved and their effects on each other. Additionally, odor measurement is difficult because no instrument has been found to successfully measure odor and all its components.

Construction equipment exhaust would be a temporary source of odors that could occur in the immediate vicinity of the Project site. Odors generated during construction will be short-term and not result in a long-term odorous impact to the surrounding area.

Regarding odors during operation of the Project, only the potential on-site wastewater treatment facility (see Area A on **Figure 3-8**) south of the New Greenspot Bridge represents a type of land use that is identified in the ARB Air Quality and Land Use Handbook as a common source of odor complaints (ARB 2005, p. 34).

There are no sensitive receptors in the adjacent to Area A where the potential on-site wastewater treatment facility would be located. The nearest existing sensitive receptor is approximately 0.7 miles away, and as odor intensity decreases as distance from the source increases, this distance will facilitate fresh air to mix with any odors, resulting in considerable decreased odor intensity. Moreover, given the relatively small size of the wastewater treatment facility, the anticipated design to incorporate odor

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- Suspending earthmoving operations or increasing watering to meet Rule 403 criteria if winds exceed 25 mph;
- Minimizing track-out emissions using the allowable methods; and,
- Limiting vehicle speeds to 15 miles per hour or less in staging areas and on haul roads.

MM AQ 5: During construction, one of the following scenarios shall be applied:

- A maximum of 15,700 horsepower hours per day for the off-road equipment shall be used and the off-road equipment shall have Tier 2 engines or higher.
- A maximum of 12,100 horsepower hours per day for the off-road equipment shall be used.

5.3.7 Summary of Project-Specific Environmental Effects after Mitigation Measures are Implemented

The Project is not anticipated to conflict with implementation of the AQMP. This impact is considered **less than significant without mitigation**.

The Project's construction and operation will not create objectionable odors affecting a substantial number of people and the impact is considered **less than significant without mitigation.**

The Project's emissions exceed applicable SCAQMD thresholds during construction and operation. Implementation of mitigation measures **MM AQ 1** through **MM AQ 5 4** during construction of the Project will reduce the short-term construction emissions. However, there are either no quantitative reductions associated with these mitigation measures or the reductions were already included in the emissions estimates summarized above. It is not anticipated that the reductions from **MM AQ 1** through **MM AQ 5** will be sufficient to reduce impacts below the level of significance. Thus, short- and long-term impacts from the Project remain **significant and unavoidable after implementation of mitigation measures**.

5.3.8 Summary of Cumulative Environmental Effects after Mitigation Measures are Implemented

The cumulative analysis for air quality is based on the guidance provided by SCAQMD, which considers projects that exceed the project-specific significance thresholds to be cumulatively considerable. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.

As previously stated, construction-related daily emissions are less than SCAQMD's mass daily significance thresholds for CO, SO_2, PM-10, and PM-2.5, and greater than the SCAQMD mass daily significance thresholds for VOC and NO_X. Other construction projects in the vicinity of the Project site could also contribute emissions that would cumulatively increase these concentrations. Cumulative impacts associated with CO, SO_2, PM-10 and PM-2.5 construction emissions would be less than significant. In terms of localized air quality impacts, construction of the Project would not have a cumulatively considerable impact with respect to the SCAQMD thresholds, but would exceed the federal 1-hour NO_2 standard.

The Project's operational emissions (with or without the Neighborhood Commercial overlay) will exceed the SCAQMD's threshold for VOC, NO_X, CO, ~~and~~ PM-10, and PM-2.5 emissions. Thus, the Project would have a cumulatively considerable increase in emissions due to operational-related VOC, NO_X, CO, ~~and~~ PM-10, and PM-2.5 emissions.

Mitigation measures will be implemented to reduce these emissions, but will not reduce impacts to less than significance levels. Thus, the Project's impacts remain **cumulatively significant and unavoidable**.

Additional information about cumulative impacts is provided in Section 7 of this DEIR.

5.3.9 References

The following references were used in the preparation of this section of the DEIR:

ARB 2005 — California Air Resources Board, *Air Quality and Land Use Handbook: A Community Perspective*, April 2005. (Available at http://www.arb.ca.gov/ch/landuse.htm, accessed on October 24, 2013.)

AQMP — South Coast Air Quality Management District, *2012 Air Quality Management Plan,* December 2012. (Available at http://www.aqmd.gov/aqmp/2012aqmp/Final/index.html, accessed October 24, 2013.)

AQMP EIR — South Coast Air Quality Management District, *Final Program Environmental Impact Report for the 2012 Air Quality Management Plan*, December 7, 2012. (Available at http://www.aqmd.gov/ceqa/documents/2012/aqmd/finalEA/2012AQMP/2012aqmp_fpeir.html, accessed October 24, 2013.)

ENVIRON(a) — ENVIRON, *Air Quality Technical Report, Harmony Specific Plan, Highland, California*, August ~~January 13~~, 2014. (Appendix C)

EPA 2005 — U.S. Environmental Protection Agency, *Six Common Air Pollutants*, (Available at http://www.epa.gov/air/urbanair/, accessed October 24, 2013.)

HSP — City of Highland, *Harmony Draft Specific Plan*, March 2014. (Available at the City of Highland.)

SCAQMD — South Coast Air Quality Management District, *Air Quality Data 2010–2012*. (Available at http://www.aqmd.gov/smog/historicaldata.htm, accessed October 2013.)

SCAQMD 1993 — South Coast Air Quality Management District, *CEQA Air Quality Handbook*, November 1993. (Available at SCAQMD.)

SCAQMD 2005 — South Coast Air Quality Management District, *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, May 6, 2005. (Available at http://www.aqmd.gov/prdas/aqguide/doc/aq_guidance.pdf, accessed October 24, 2013.)

Updates and Revisions to Section 5.4, Biological Resources

5.4 Biological Resources

This section evaluates the Project's potential impacts related to biological resources.

The following discussion of potential impacts is based on the *Habitat Assessment* prepared by RBF Consulting, January 2014 (RBF(a)), and the *Greenspot Jurisdictional Delineation Report* prepared by VCS Environmental, October 2012 (VCS). These reports are contained in Appendix D.1 and Appendix D.2, of this document, respectively. The *Sensitive Habitats Analysis*, prepared by RBF, August 2014 (RBF(b)), contains an updated discussion of the existing vegetation and habitat found on the Project site as well as on- and off-site impacts to sensitive habitats. This analysis is contained in Appendix P.1 of this document. Appendix P.2 contains the *Results of Least Bell's Vireo Surveys*, prepared by RBF, July 2014 (RBF(c)). Appendix P.4 contains the updated *Results of a Wildlife Corridor Analysis*, prepared by RBF, July 2014 (RBF(d)). Appendix P.4 contains an analysis of a potential off-site bridge or crossing over Mill Creek. The *Mill Creek Bridge* analysis was prepared by RBF, August 2014 (RBF(e)).

5.4.1 Setting

The Project site consists of approximately 1,657 acres situated in the eastern section of the City of Highland, San Bernardino County, California. The Project site is irregular in shape and is generally bounded by Mill Creek to the south, the Santa Ana River and Greenspot Road to the west, the San Bernardino National Forest to the north, and unincorporated San Bernardino County to the east. Elevation ranges from approximately 1,800 to 2,700 feet above mean sea level. The Project site is characterized as mostly gently sloping and rolling terrain in the south and west with moderately to steeply sloping foothills in the north and northeast. (RBF(a), p. 11) The site is predominantly vacant, but has been substantially modified by past agricultural and irrigation practices, surface mining operations (as a borrow site), and water supply infrastructure (VCS, p. 1). Approximately six million cubic yards of earth was excavated from the site for construction of the Seven Oaks Dam from an approximately 830-acre area known as the borrow site (VCS, p. 1, 5).[1]

The surrounding area is a combination of agricultural (i.e. citrus orchards), rural residential, and the Santa Ana River to the west, Mill Creek to the south, and the San Bernardino Mountains to the north of the Project site. A few residences are also located just east of the Project site and the Seven Oaks Dam is located north of the Project site.

5.4.1.1 Vegetation

Six main plant communities were identified with varying levels of disturbances within the Project boundaries: Riversidean alluvial fan sage scrub (RAFSS), Riversidean Sage Scrub (RSS), riparian, chaparral, agricultural, and ruderal. Refer to **Figure 5.4-1 – Vegetation Map**, for the location of vegetation community types in the Project site. Human activities such as agricultural and irrigation practices as well as surface mining operations (borrow for Seven Oaks Dam) have substantially modified natural habitats occurring on the Project site. Additionally, the plant communities have been subjected to naturally occurring wildfires, the last significant fire, the Florida Fire occurred on August 28, 2011 and

[1] Although the Jurisdictional Delineation indicates approximately five million cubic yards of soils was exported, other estimates report approximately six million cubic yards of export.

burned 67 acres. The combination of human disturbances and wildfires on the Project site have resulted in significant modifications to the native plant communities on the Project site and may have reduced the connectivity of the San Bernardino National Forest found to the north of the Project site and to both the Santa Ana River and Mill Creek found along the southern and western boundaries of the Project site (RBF(a), p. 13).

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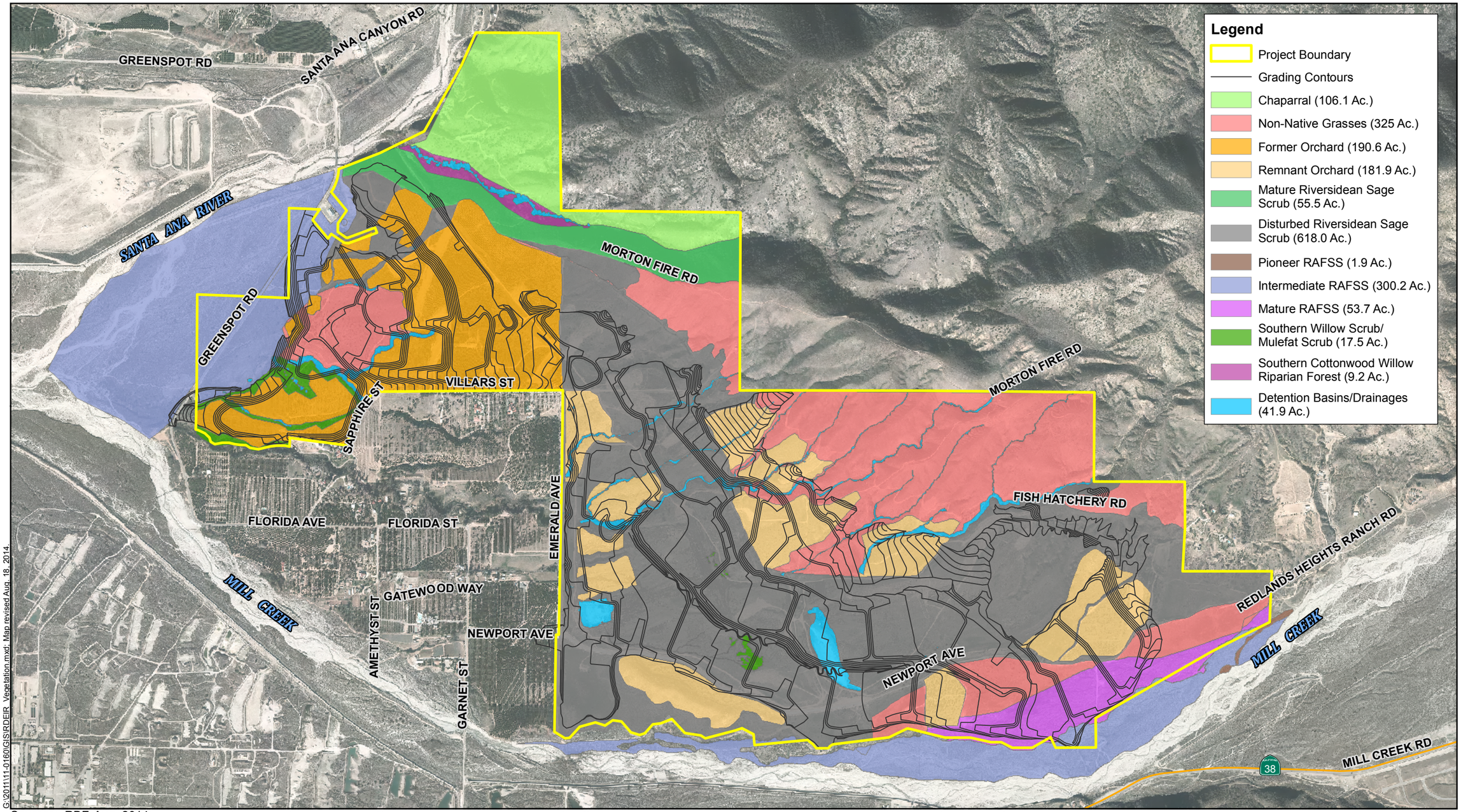

G:\2011\11-0160\GIS\RDEIR_Vegetation.mxd: Map revised Aug. 18, 2014.

Sources: RBF, Aug. 2014;
San Bernardino Co., 2012

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Figure 5.4-1 – Vegetation Map
Harmony Specific Plan Recirculated Draft EIR

The following is a discussion of the plant communities identified on the Project site and shown on **Figure 5.4-1**:

Riversidean Alluvial Fan Sage Scrub (RAFSS) – approximately 119.4 ~~117~~ acres

The banks of the Santa Ana River and Mill Creek support all three phases of RAFSS habitat: pioneer, intermediate and mature ~~RAFSS habitat occurring on the Project site is associated with the flood plains along the Santa Ana River and Mill Creek~~. These two streams flow in a southwesterly direction adjacent to the Project site and the RAFSS habitat associated with them extend from the banks of the two streams into ~~inside~~ the western and southern boundaries of the Project site. The RAFSS habitat on the western boundary of the Project site is an intermediate ~~a mature~~ RAFSS community composed of ~~chamise (*Adenostoma fasciculatum*), California brickelbush (*Brickellia californica*), hoary leaf ceanothus (*Ceanothus crassifolius*), chaparral whitethorn (*Ceanothus leucodermis*), California juniper (*Juniperus californica*), California buckwheat, deerweed, holly-leaved cherry (*Prunus ilicifolia*), spiny redberry (*Rhamnus crocea*), and white sage (*Salvia apiana*). Whereas the RAFSS habitat on the southern boundary is an intermediate RAFFS community composed of~~ scalebroom (*Lepidospartum squamatum*), California buckwheat, brittlebush, matchweed (*Gutierrezia californica*), broom matchweed (*Gutierrezia sarothrae*), telegraph weed (*Heterotheca grandiflora*), coastal goldenbush (*Isocoma menziesii*), interior goldenbush (*Ericameria linearifolia*), hairy yerba santa (*Eriodictyon trichocalyx*), California sagebrush (*Artemisia californica*), Coastal prickly pear (*Opuntia littoralis*), valley cholla (*Opuntia parryi*), shrubby butterweed (*Senecio flaccidus*), and Our Lord's candle (*Yucca whipplei*).

In comparison, the RAFSS habitat on the southern boundary includes both intermediate and mature RAFSS. The mature RAFSS habitat is composed of chamise (*Adenostoma fasciculatum*), California brickelbush (*Brickellia californica*), hoary leaf ceanothus (*Ceanothus crassifolius*), chaparral whitethorn (*Ceanothus leucodermis*), California juniper (*Juniperus californica*), California buckwheat, deerweed, holly-leaved cherry (*Prunus ilicifolia*), spiny redberry (*Rhamnus crocea*), and white sage (*Salvia apiana*).

There are 355.9 acres of RAFSS habitat along the Harmony property's western and southern boundaries; 206.1 acres on the western boundary and 149.8 acres along the southern boundary. The majority of this RAFSS habitat (236.5 acres) occurs outside the Harmony property boundaries along the banks of the Santa Ana River and Mill Creek. There are 119.4 acres of RAFSS habitat found within the Project boundaries.

The RAFSS habitat, primarily the intermediate RAFSS habitat, provides suitable habitat for both federally and state endangered Santa Ana River woollystar and slender-horned spineflower, as well as the federally endangered San Bernardino kangaroo rat. Santa Ana River woolly star and SBKR were both identified on the Project site (RBF(b ~~a~~), pp. 1-2~~3~~).

Riversidean Sage Scrub (RSS) – 673.5 ~~124~~ acres

The predominant plant community occurring on the Project site is a RSS community occurring in various stages of disturbance and recovery. (RBF(b), p. 6) ~~Areas of higher quality undisturbed RSS are primarily associated with the sides of drainage features traversing the Project site. These undisturbed RSS areas were determined to have the highest potential to support the federally threatened coastal California gnatcatcher (RBF(a), p. 13).~~

1. **Mature Riversidean Sage Scrub (RSS) (55.5 acres):** An area of higher quality undisturbed/mature RSS occurs at the northwest corner of the Project site on the terraces south of Morton Canyon. This area has not been graded for agricultural purposes or used for borrow and has been relatively protected from the periodic wild fires that have swept the Project site. As a result, the area still supports an older, mature RSS plant community with plants that have not been altered by man-made disturbances or natural disturbances.

2. **Buckwheat Dominated Disturbed RSS (107.3 acres):** The majority of disturbed RSS is found in the central portion of the property and is composed mostly of California buckwheat (*Eriogonum fasciculatum*). California buckwheat is typically used to re-vegetate areas that have been disturbed and is one of the early pioneer species encountered during natural recovery of a native RSS plant community. The buckwheat dominated areas occur within those areas where borrow was removed as part of the construction of the Seven Oaks Dam and represent an early successional phase of RSS recovery.

3. **Brittlebush Dominated Disturbed RSS (67.3 acres):** The brittlebush (*Encelia farinosa)* dominated disturbed RSS is primarily found on the northern and southern portions of the Project site in areas that once supported large orchards. The orchards have been removed and the vacant land has revegetated with a brittlebush-dominated RSS and represents a successional phase of RSS recovery.

4. **Sagebrush Dominated Disturbed RSS (35.6 acres):** California sagebrush (*Artemisia californica)* dominated disturbed RSS is primarily found on the northern and central portions of the property in areas that once supported large orchards. The orchards have been removed and the vacant land has revegetated with a sagebrush-dominated RSS and represents a successional phase of RSS recovery.

5. **Highly Disturbed Riversidean Sage Scrub (407.8 acres):** The majority of the RSS habitat found on on-site has been heavily disturbed by agricultural activities and the removal of borrow and only support scattered elements of the former RSS plant communities that once dominated the foothills of the San Bernardino Mountains. These areas of disturbed RSS have not revegetated with early successional phases of RSS habitat. Instead, these areas have also become vegetated with non-native grasses, further reducing the quality of the habitat.

~~**Disturbed RSS – 668acres**~~

~~The majority of the disturbed RSS is composed of California buckwheat (*Eriogonum fasciculatum*), primarily in the central portion of the site. California buckwheat is typically used to re-vegetate areas that have been disturbed and is one of the early pioneer species encountered during natural recovery of a native RSS plant community. Other areas of disturbed RSS are dominated by brittle bush (*Encelia farinosa*) and California sagebrush (*Artemisia californica*). The brittle bush dominated disturbed RSS is primarily found on the northern and southern portions of the Project site, and the California sagebrush dominated disturbed RSS is primarily found on the northern and central portions of the property associated with buckwheat (RBF(a), p. 15).~~

Riparian – ~~approximately 33~~ 26.7 acres

Two different riparian plant communities were found on the Project site. These riparian areas have been identified as southern cottonwood willow riparian forest and southern willow scrub/mulefat scrub. ~~Various areas on the Project site supports riparian vegetation found in association with the drainage features, irrigation channels, and excavated borrow pits. The majority of these drainages occur on the southwest corner of the Project site just east of Greenspot Road and are dominated by large riparian woodland species such as Eucalyptus, Freemont cottonwood (*Populus fremontii),* and Sycamore (*Platanus recemosa)*. Stands of salt cedar (*Tamarix ssp.*) can also be found along some drainage features (RBF(a), p. 15).~~

Southern Cottonwood Willow Riparian Forest – 9.2 ~~13~~ acres

This habitat is found along Morton Creek, in the northwest portion of the Project site abutting the San Bernardino National Forest. ~~It is a tall, multilayered, open, canopy riparian community. Southern cottonwood willow riparian forest characteristically has the potential to provide suitable habitat for both federally and stated endangered least Bell's vireo and southwestern willow flycatcher.~~ The dominant vegetative species within this riparian forest include: Freemont cottonwood (*Populus fremontii),* black cottonwood (*P. tremuloides*), eucalyptus and several tree willows (*Salix* spp). Characteristic species, in addition to the eucalyptus and cottonwood, include black willow (*S. goodingii*) narrow-leaved willow (*S. exigua*), arroyo willow (*S. lasiolepis*), red willow (*S. laevigata*), mulefat (*Baccharis salicifolia*), Sycamore (*Platanus recemosa)* and elderberry *(Sambucus mexicana).* The under story consists of cattail (*Typha ssp.*) and other native herbaceous riparian plants ~~(RBF(a), p. 15)~~. Southern cottonwood willow riparian forest characteristically has the potential to provide suitable habitat for both the federally and state endangered least Bell's vireo and the southwestern willow flycatcher. (RBF(b), p. 9)

Southern Willow Scrub / Mulefat Scrub – 17.5 ~~15~~ acres

The southern willow scrub/mulefat scrub habitat is located in the central portion of the Project site. This portion of the Project site has been heavily modified by human disturbances, primarily the borrow site activities associated with the construction of the Seven Oaks Dam. The modified conditions have resulted in the development of a deep erosional feature or pit. This pit concentrates sufficient sheetflow runoff to support an isolated riparian plant community of willow trees and mulefat (RBF(b ~~a~~), p. 8~~15~~).

~~**Ponded Area – 5 acres**~~

~~A 5-acre depression or pond is located in the central portion north of Newport Avenue that retains water during the wet season. The ponded area is primarily un-vegetated. A limited amount of vegetation occurs along the north side of the pond and consists of an early seral community of mulefat (*Baccharis salicifolia*) (RBF(a), p. 15).~~

Chaparral – 106.1 acres

A chaparral plant community occurs at the northern most boundary of the Project site north of Morton Creek at the interface with the San Bernardino National Forest. This plant community is dominated by chamise (*Adenostoma fasciculatum*), California juniper (*Juniperus californica*), and matchweed (*Gutierrezia califonica*) (RBF(a), p. 16; RBF(b), Exhibit 1).

Agricultural – 372.5 ~~256~~ acres
Historically, the Project site was used for agriculture production. The Project site contains several large citrus groves (RBF(b), p. 16).

Former Orchard Areas – 190.6 ~~187~~ acres
Citrus trees from a former orchard remain on the northwest portion of the property. Non-native grasses and wild grapes dominate the understory of the citrus grove. This former orchard area contains live citrus threes, but the area has not been cultivated or tilled, allowing the understory to become dominated by non-native vegetation. The first few rows of trees on the Project site adjacent to Tres Lagos Street have been removed to maintain a fire break between the property and the adjacent residences. According to the County of San Bernardino, no agricultural production has not taken place on the Project site for over 20 years (RBF(a), p. 16; RBF(b), Exhibit 1).

Remnant Orchard Areas–181.9 ~~69~~ acres
Remnant orchards are scattered throughout the central and eastern portion of the Project site and primarily consist of Mexican elderberry (*Sambucus mexicana*), toyon (*Heteromeles arbutifolia*) and early successional RSS plant species, such as California buckwheat and brittle bush, and non-native grasses (RBF(a), p. 16; RBF(b), Exhibit 1).

Ruderal ~~– 334 acres~~
Several areas on the Project site support early successional non-native grasses/ruderal communities that have become established following the abandonment of agricultural activities and surface mining operations. Non-native weedy species found within this community include Bromes (*Bromus ssp.*), oats (*Avena ssp.*), Russian thistle (*Salsola targus*), telegraph weed (*Heterotheca grandiflora*), ragweed (*Ambrosia artemisiifolia*), common sunflower (*Helianthus annuus*), and mustards (*Brassica ssp.*) (RBF(a), p. 16).

Non-Native Grasslands – 325 ~~328~~ acres
The hills on the northeastern boundary of the Project site abutting the San Bernardino National Forest were recently disturbed by a wildfire that eliminated the natural plant communities. These hills are now dominated by non-native grasses (RBF(a), p. 16; RBF(b), Exhibit 1).

Detention Basin/Drainages – 41.9 ~~6~~ acres
~~A 6-acre w~~Water detention basins were ~~was~~ created in the southwest portion of the Project site north of Newport Avenue for the Seven Oaks Dam project and remain~~s~~ in operation today. ~~This~~ The basins are ~~is~~ un-vegetated and have ~~has~~ rip-rap sides. ~~It~~ They are typically ~~is~~ filled with water during the winter months (RBF(a), p. 16; RBF(b), Exhibit 1). **Figure 5.4-1** also shows the drainages that traverse the Project site.

For a complete list of plant species observed on-site, see Appendix B of the *Habitat Assessment* in Appendix D.1 of this DEIR.

5.4.1.2 Wildlife
The open, vacant lands and remnant orchards occurring on-site and on the surrounding properties provide ample foraging and shelter opportunities for an array of wildlife species. Most of the wildlife

activity observed on the Project site during the habitat assessment and subsequent focused surveys consisted of avian species. Avian species observed and/or heard during the habitat assessment were American crow (Corvus brachyrhynchos), red-shouldered hawk (Buteo lineatus), red-tailed hawk (Buteo jamaicensis), Cooper's hawk (Accipter cooperii), loggerhead shrike (Lanius ludovicianus), cactus wren (Campylorhynchus brunneicapills), phainopepla (Phainopepla nitens), white-tailed kite (Elanus leucurus), black-headed grosbeak (Pheucticus melanocephalus), mourning dove (Zenaida macroura), California quail (Callipepla californiaca), western meadow lark (Sturnella neglecta), ladder-backed woodpecker (Picoides scalaris), black-tailed gnatcatcher (Polioptila melanura), Anna's hummingbird (Calypte anna), house finch (Carpodacus mexicanus), lesser goldfinch (Spinus psaltria), western kingbird (Tyrannus melancholicus), northern mockingbird (Mimus polyglottos), Bullock's oriole (Icterus bullockii), barn owl

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Common Name	Scientific Name	Status		Observed On-site	Occurrence Potential
		Fed	State		
Sierra Madre yellow-legged frog	*Rana muscosa*	FE	CSC, SCE	No	Moderate
silvery legless lizard	*Anniella pulchra pulchra*	-	CSC	No	Moderate
southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*	-	WL	No	Moderate
southern rubber boa	*Charina umbratica*	-	ST	No	No Suitable Habitat
southwestern willow flycatcher	*Empidonax traillii extimus*	FE	SE	Yes	Present
Stephen' kangaroo rat	*Dipodomys stephensi*	FE	ST	No	Low
two-striped garter snake	*Thamnophis hammondii*	-	CSC	No	Moderate
western mastif bat	*Eumops perotis californicus*	-	CSC	No	Low
western spadefoot toad	*Spea hammondii*	-	CSC	No	Moderate
western yellow bat	*Lasiurus xanthinus*	-	CSC	No	Low
western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	FCE	SE	No	Low
white-eared pocket mouse	*Perognathus alticolus alticolus*	-	CSC	No	No Suitable Habitat
white-tailed kite	*Elanus leucurus*	-	FP	Yes	Present
yellow warbler	*Dendroica petechia brewsteri*	-	CSC	Yes	Present
yellow-brested chat	*Icteria virens*	-	CSC	Yes	Present

Source: RBF(a), Appendix B.
-- Not applicable.

Federal -USFWS
FE = Federal Endangered
FT = Federal Threatened
FCE = Federal Candidate Endangered

State -CDFW
SE = State Endangered
ST = State Threatened
CSC = California Species of Concern
WL = Watch List
SCE = California Candidate Endangered
FP = Fully Protected.

5.4.1.5 Sensitive Habitats

Sensitive habitat types are natural vegetation communities that support concentrations of sensitive plant or wildlife species, are of relatively limited distribution, or are of particular value to wildlife. Although sensitive habitats are not necessarily afforded legal protection unless they support protected species, potential impacts to them may increase concerns and mitigation suggestions by resources agencies. Nine sensitive habitat types are known from the site vicinity. Three sensitive habitat types were observed on the Project site during the habitat assessment: Riversidean Alluvial Fan Sage Scrub (RAFSS), Riversidean Sage Scrub (RSS), and riparian (consisting of Southern Cottonwood Willow Riparian

Forest~~,~~ and Southern Willow Scrub/Mulefat Scrub. (RBF(a), Appendix B; RBF(b), Exhibit 1) These habitats are described above, under section 5.4.1.1.

5.4.1.6 Critical Habitat

Critical habitat is a term defined and used in the Federal Endangered Species Act. It is specific geographic areas that contain features essential to the conservation of a threatened or endangered species and may include areas that are not currently occupied by the species but that will be needed for its recovery.[3] Critical Habitat for the San Bernardino kangaroo rat is located within the Project site along the southern boundary and northwest boundary. Critical Habitat for Santa Ana sucker is located in Mill Creek and the Santa Ana River to the southeast, south and west of the Project site as shown in **Figure 5.4-2 – Critical Habitat**.

5.4.1.7 Jurisdictional Resources

A jurisdictional delineation was prepared for the entire Project site (VCS) to determine the extent and location of jurisdictional drainages, including streams regulated by CDFW pursuant to Section 1602 of the California Fish and Game Code and waters of the US regulated by the United States Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act. Waters of the US are defined to include waters, streams, and wetlands that have an above-ground or below-ground connection to navigable waters, and tributaries to these waters. In non-tidal waters, the limits of jurisdiction under this definition are defined by the ordinary high water mark (OHWM) identified through field observation of features such as shelving and debris deposits. USACE jurisdiction over non-tidal waters of the US extends to the OHWM or beyond the OHWM to the limit of any adjacent wetlands, if present. The USACE defines a wetland by three criteria: hydrology, soils, and vegetation. A stream under California Department of Fish and Wildlife (CDFW) jurisdiction is defined as a body of water that flows at least periodically through a bed or channel having banks and supports fish or other aquatic life. This definition includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation. CDFW regulates wetland areas only to the extent that those wetlands are part of a stream, river, or lake as defined by CDFW. CDFW jurisdictional boundaries reach to the tops of stream banks and/or within the limit of the canopy of riparian vegetation that is hydrologically connected to the stream. (VCS, p.7) Pursuant to Section 401 of the Clean Water Act, the Regional Water Quality Control Board (RWQCB) regulates water quality for all waters that USACE has determined are under its jurisdiction. Waters found to be not subject to regulation under the Clean Water Act may be regulated by the RWQCB under California's Porter-Cologne Water Quality Control Act. (VCS, p.8)

The Project site contains 16 jurisdictional drainage features that were delineated using approaches recommended by the regulatory agencies for this site. USACE jurisdiction totals of 2.31 acres and CDFW jurisdiction totals 47.81 acres (VCS, p. 18). Refer **Table 5.4-C – Summary of Jurisdictional Features**, for the length and acreage of the jurisdictional drainage features. **Figure 5.4-3 – USACE Jurisdiction** and **Figure 5.4-4 – CDFW Jurisdiction** show the location of the jurisdictional features located within the Project site.

[3] http://www.fws.gov/endangered/what-we-do/critical-habitats-faq.html, accessed April 30, 2013.

Project site are also located within U.S. Fish and Wildlife Service designated critical habitat for SBKR (refer to **Figure 5.4-2 – Critical Habitat**). No SBKR were captured during presence/absence trapping surveys within the RAFSS habitat along the east side of Greenspot Road. One (1) adult scrotal male SBKR was trapped on the final trap night within the RAFSS habitat along the southern boundary, south of Newport Avenue/Redlands Heights Ranch Road. Based on the trapping results, the far southerly boundary of the subject property along the northern side of the Mill Creek floodplain is currently occupied by trace levels of SBKR. (RBF(a), p. 20)

The Primary Constituent Elements (PCEs) essential to support the biological needs of foraging, reproducing, rearing of young, intra-specific communication, dispersal, genetic exchange, or sheltering for SBKR are:

- River, creek, stream, and wash channels; alluvial fans, flood plains, flood benches and terraces; and historic braided channels that are subject to dynamic geomorphological and hydrological processes;
- Alluvial Sage Scrub and associated vegetation such as coastal sage scrub and chamise chaparral with a moderately open canopy;
- Soil series consisting of sand, sandy loam, or loam within its geographical range;
- Upland areas proximal to flood plains containing suitable habitat (land adjacent to alluvial fan that provides Refugia); and
- Moderate-to-low degree of human disturbances to habitat.

The RAFSS habitat on the Project site provides several of the essential PCEs needed for the biological requirements of SBKR. However, along the western boundary of the Project Site the RAFSS habitat is no longer subject to the hydrologic/alluvial processes from the Santa Ana River needed in order to scour the vegetation onsite to maintain open habitat and deposit sandy soils. The area, while still open, has become rocky with little or no soils. Focused surveys in this area were negative. The RAFSS habitat along the southern boundary is still subject to the alluvial processes associated with Mill Creek but the benches above the creek bed support rocky substrates with limited soils. Focused surveys only trapped one (1) SBKR, and this RAFSS community is considered occupied at only a trace level. (RBF(a), p. 22)

The majority of RAFSS habitats within the Project site will not be developed. Two areas within the Project site were identified as supporting RAFSS habitat with the potential to provide suitable habitat for San Bernardino Kangaroo Rat (SBKR) (see **Figure 5.4-6 – RAFSS Habitat Impact~~5.4-1 – Vegetation Map~~**). There are 61.3 ~~58.6~~ acres of intermediate RAFSS habitat along the western boundary and 7.3 acres of intermediate RAFSS habitat at the southeast corner of the Project site that are suitable for SBKR, for a combined total of 68.6 acres~~65.9~~ within the Project site. Presence/Absence trapping surveys were conducted by a permitted biologist within both areas. No SBKR were captured over the course of the 5-night trapping session within the ~~58.6 acres of~~ RAFFS habitat along the western boundary of the Project site. A single adult scrotal male SBKR was trapped on the final trap night during the 2011 trapping effort in the 7.3 acres of RAFFS habitat at the southeast corner of the Project site. However, no SBKR were caught during the 2012 trapping effort. Based on these trapping results, the 7.3 acres of intermediate

RAFSS habitat at the southeast corner of the subject property along the northern side of the Mill Creek floodplain is considered occupied at trace levels by SBKR. (RBF(a), p. 31)

A total of 49.0 ~~31.8~~ acres of the 68.6 ~~65.9~~ acres of intermediate RAFSS habitats found on the Project site will not be developed. The ~~se 31.8~~ majority (43.8 acres) of the 49.0 acres are found in the southwest corner of the Project site on both sides of Greenspot Road and include the area supporting SARWS. (see **Figure 5.4-6)** No SBKR were trapped in this area of intermediate RAFSS habitat in 2011 and 2012 and the area is considered unoccupied by SBKR. Approximately 90-acres of intermediate RAFFS habitat are found between Mill Creek and south of the proposed development associated with the Harmony Specific Plan. Eighty ~~three~~ six acres (86.4 ~~82.7~~ acres) occurs outside of the Project boundaries and will not be developed. Development will occur on 2.5 ~~7.3~~ acres (2.6 ~~8~~ percent) of the ~~approximately~~ 94.1 ~~90~~ acres of intermediate RAFSS habitat at the southeast corner of the Project site (see **Figure 5.4-~~61 – Vegetation Map~~**). The on-site ~~se~~ 2.1 ~~7.3~~ acres were determined to be occupied by SBKR at trace levels. (RBF(a), pp. 31, 32)

One storm drain facility that is presently planned to be placed about 2,500 feet west of the 7.3-acre area found to be occupied by SBKR may extend off the Project site into the approximately 90 acres of intermediate RAFSS located between the site's southern boundary and Mill Creek. Although the exact location and design of the storm water facility is not known at this time, significant direct impacts could occur from the loss of RAFSS habitat, as well as significant indirect impacts to SBKR from the release of storm water into the RAFSS habitat which will be limited to ~~less than one acre~~ approximately 0.4 of off-site impacts to intermediate RAFSS habitat. ~~Once a location is defined, and the storm drain is designed the total impacts to RAFSS habitat can be determined.~~ Other potentially significant indirect impacts could occur if access to the area is open and recreational and other unauthorized uses occur. (RBF(a), 32; RBF(b), Exhibit 2) Implementation of mitigation measure **MM BIO 1** is required to reduce potentially significant indirect impacts from recreational and other unauthorized uses in intermediate RAFSS habitat. Implementation of mitigation measure **MM BIO 2** is required to reduce potentially significant direct and indirect impacts to SBKR from Project site development and construction of the off-site storm drain to less than significant levels.

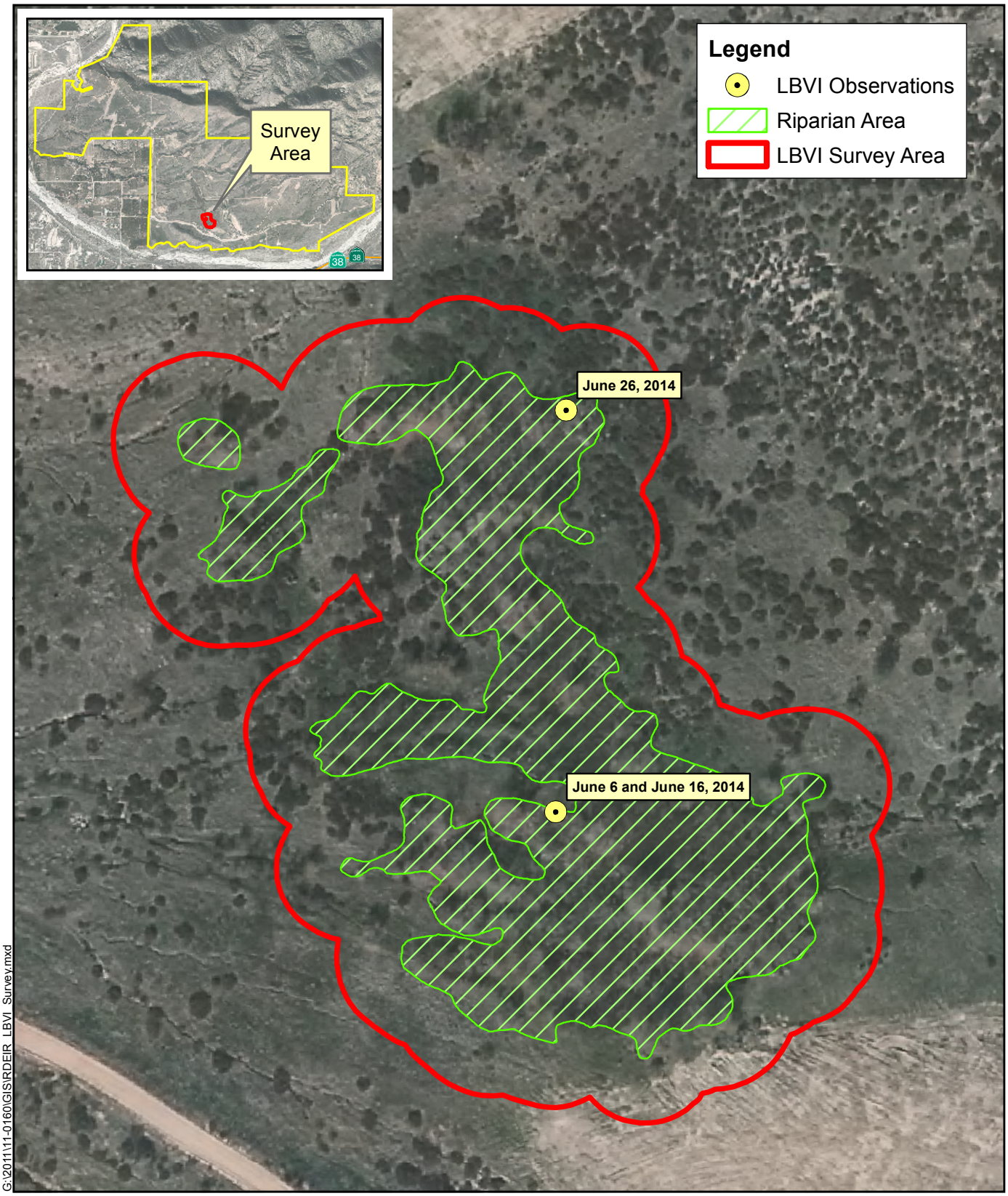
Implementation of the Project requires some additional off-site roadway improvements including: 1) Garnet Street, starting at the intersection of Garnett Street and Highway 38 north to the intersection of Garnet Street and Newport Avenue, 2) widening of Newport Avenue, from Garnet Street to the Project boundary, and 3) widening of Greenspot Road, from the S-curve to the new Greenspot Road Bridge. The habitat north of Greenspot Road consists of existing residential developments, citrus orchards, and disturbed areas. No sensitive biological resources occur along the north of Greenport Road. The habitat within 75 feet south of Greenspot Road is disturbed, but supports an intermediate RAFSS plant community with an understory dominated by non-native grasses and forbs with native plant species scalebroom, yerba santa, and California buckwheat. Chamise is also scattered within this plant community south of Greenspot Road. There are openings within the intermediate RAFSS plant community with minimal non-native grasses that have the potential to provide suitable burrowing areas for SBKR. No sign of SBKR (burrows, tail drags, or scat) was identified within the surveyed area. Although SBKR have been trapped in the general vicinity of the "S" curve, trapping results were further south, well within the Santa Ana River Wash floodplain and outside of the immediate vicinity of Greenspot Road. SBKR has a low potential to occur within the right-of-way for widening Greenspot Road in the vicinity of

The **least Bell's vireo** (LBVI), federally and state listed as endangered, is a small, olive-gray migratory songbird that nests and forages almost exclusively in riparian woodland habitats. Bell's vireos as a group are highly territorial and are almost exclusively insectivorous. LBVI nesting habitat typically consists of well-developed overstory, understory, and low densities of aquatic and herbaceous cover. The understory frequently contains dense sub-shrub or shrub thickets. These thickets are often dominated by plants such as narrow-leaf willow, mulefat, young individuals of other willow species such as arroyo willow or black willow, and one or more herbaceous species. LBVI generally begin to arrive from their wintering range in southern Baja California and establish breeding territories by mid-March to late-March. A large majority of breeding vireos apparently depart their breeding grounds by the third week of September and only a very few have been found wintering in the United States. (RBF(a), p. 24)

This small passerine species constructs open cup nests low in the riparian canopy, which may cause them be more vulnerable to brood parasitism compared to larger passerines that nest higher in the canopy. The loss of and degradation of riparian habitats have both occurred due to urban and agricultural development, fire, water diversion and impoundment, channelization, livestock grazing, off-road vehicle use and recreation, replacement of native habitats by introduced plant species, and hydrological changes resulting from these and other land uses. LBVI was first proposed for listing as endangered by the USFWS on May 3, 1985, (50 FR 18968) and was subsequently listed as federally endangered on May 2, 1986 (60 FR 10694). Critical habitat units were designated by the USFWS on February 2, 1994 (59 FR 4845) and included reaches of ten streams in six counties in southern California and the surrounding approximately 38,000 acres. The critical habitat units exist in the Santa Ynez River, Santa Clara River, Santa Ana River, Santa Margarita River, San Luis Rey River, Sweetwater River, San Diego River, Tijuana River, Coyote Creek, and Jumul-Dulzura Creek. (RBF(a), p. 24)

The southern cottonwood willow riparian forest habitat associated with Morton Creek on the northern most portion of the Project site provides suitable habitat for LBVI. LBVI were present onsite during the survey period on all four survey dates in both 2011 and 2012. One (1) breeding LBVI pair was confirmed within the focused survey area in 2011. Additionally, one LBVI individual was sighted incidentally, outside of the survey area, on three occasions in 2011. It is assumed that this bird was not a migrant passing through because it was spotted after June 15, 2011. The mulefat plant community in which it was observed is considered an expansion of the previously identified suitable LBVI habitat. The Project site is not within designated Critical Habitat for this species. (RBF(a), p. 24)

Three surveys were conducted in June 2014 within the 2.4 acre riparian area located north of Newport Road in the southeastern portion of the Project site. (**Figure 5.4-5 – 2014 LBVI Survey Area**) The areal extent of riparian habitat has grown from 0.6 acres in 2011 to 2.4 acres in 2014 and consists of black willow (*Salix gooddingi*) and mulefat (*Baccharis salicfolia*). The four fold increase in size of the riparian habitat since 2011, combined with the recent expansion of LBVI populations up the Santa Ana River and Mill Creek from the Prado Basin, has allowed LBVI to migrate into the southern portion of the Project site. Based on the results of the surveys, it was determined that a single LBVI pair is nesting in the 2.4 acres of riparian habitat in the southeastern portion of the Project site. Two adults and a single juvenile were observed. No other LBVI were observed during the three days of surveys. (RBF(c), p 3)



Source: RBF, Aug. 2014;
San Bernardino Co., 2012

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Figure 5.4-5 – 2014 LBVI Survey Area
Harmony Specific Plan Recirculated Draft EIR

The proposed Project has been designed to avoid and/or minimize impacts to sensitive wildlife species. The areas around Morton Creek and Deep Creek shall be maintained as natural open space where LBVI were observed breeding in 2011 and foraging in 2012. The Project will result in direct impacts to LBVI habitat within the 2.4 acre patch of southern willow scrub/mulefat riparian habitat where LBVI were observed nesting in 2014. The presence of LBVI within the development footprint will require the acquisition of an Individual Take Permit (ITP) from both CDFW and USFWS prior to development of the area. As part of the process of preparing ITPs (Section 7 Consultation under the Federal Endangered Species Act and Section 2081 under the California Endangered Species Act), biologically equivalent LBVI habitat will be preserved and managed in perpetuity, either on-site and/or within the general vicinity to offset impacts from the loss of this 2.4-acres of LBVI occupied riparian habitat. Potential suitable locations include the existing LBVI habitat along Mill Creek, south the Project site, and along the Santa Ana River, west of the Project site. Additionally, existing riparian habitats along the upper end of the Santa Ana River, west of the Project, as well as LBVI occupied habitats within Morton Canyon in the northern portion of the Project site, could be enhanced. **MM BIO 7** requires the acquisition, preservation, and management of 2.4 acres of biologically equivalent LBVI habitat within the Project boundaries or in the Project vicinity. ~~Although LBVI was only observed breeding in Morton Canyon, at least one individual was observed foraging further south of Morton Canyon in an area with mulefat riparian vegetation in 2011. LBVI were observed foraging but not breeding in Morton Canyon in 2012. LBVI were not observed outside of Morton Canyon in 2012. There would be no direct impacts to LBVI as a result of the proposed Project.~~ Indirect impacts could occur if access to the Morton Canyon area is open and if unauthorized uses occur. (RBF(a), p. 34) **Implementation of mitigation measure MM BIO 1 is required to reduce potential indirect impacts to LBVI in Morton Canyon to less than significant levels and MM BIO 7 is required to reduce potential direct impacts to LBVI outside of Morton Canyon to less than significant levels**.

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Diego horned lizard, western spadefoot and Lawrence's goldfinch) are either present or have the potential to occur within the RSS habitat found within the proposed development footprint. However, it should be noted that all of these species are also known to utilize the adjacent RAFSS habitats found along the western and southern boundaries of the Project site. In addition, there are various patches of riparian habitats internal to the development footprint that will be preserved and maintained as natural and manufactured open spaces between the various tracts and development phases. Of the nine special status species identified as subject to potential impacts from Project development, only the loggerhead shrike was observed onsite and could be impacted during site development. The remaining eight species have all been determined to have a moderate or higher potential to occur onsite, however, none were observed during the habitat assessments and focused species surveys. The observation of the loggerhead shrike occurred during foraging behavior. No nesting behavior was observed. Impacts would be expected to be limited to loss of foraging habitat. Similarly, three special status raptor species (**Cooper's hawk, golden eagle and white-tailed kite**), were observed foraging over the Project site. None of these three raptor species are known to nest on the Project site. Suitable nesting habitat for Cooper's hawk does occur within Morton Canyon, an area of the Project site that will not be impacted. Although the Project site provides open space, primarily former and remnant orchards, disturbed Riversidean sage scrub and non-native grasslands, portions of which will be developed, the Project is located in a region that has been subject to rural development and still supports large areas of open space that will continue to provide foraging opportunities for all of the above avian species. The Upper Santa Ana River Wash Habitat Conservation Plan abuts the western boundary of the Harmony Specific Plan and will provide over 5,000 acres of permanently protected open space and managed conservation areas. In addition, the San Bernardino National Forest abuts the northern Project boundary and will also continue to provide foraging opportunities. Indirect impacts to special status species would occur if access to the riparian habitats along the western and southern boundaries and Morton Canyon remain open to recreational and other non-authorized uses. **Mitigation measure MM BIO 1 and MM BIO 3 are required to reduce potential indirect impacts to special status wildlife species to less than significant levels**. (RBF(a), pp. 36)

Threshold: *Would the proposed Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.*

As outlined above the Project site contains three plant communities considered sensitive by CDFW and listed by the CNPS: Riversidean Alluvial Fan Sage Scrub (RAFSS), Riversidean Sage Scrub (RSS), and riparian (consisting of Southern Cottonwood Willow Riparian Forest and Southern Willow Scrub/Mulefat Scrub). There are 119.4 ~~116.6~~ acres of **Riversidean Alluvial Fan Sage Scrub** (RAFSS) habitat within the Project boundary that are ~~is~~ associated with the banks of ~~floodplains along~~ the Santa Ana River and Mill Creek. These two streams flow in a southwesterly direction adjacent to the Project site and the RAFSS habitat associated with them extend inside the western and southern boundaries, refer to **Figure 5.4-1 – Vegetation Map**. (RBF(a), p. 13, 41; RBF(b), Exhibit 1) RAFSS habitat will be avoided when feasible. (**Figure 5.4-6 – RAFSS Habitat Impacts)** The 1.9 acres of Pioneer RAFSS southeast of the Project site will be avoided. Approximately 43.8 acres of intermediate RAFSS habitat west of the realigned Greenspot

Road will be avoided. These 43.8 acres are continuous with the 140.5 acres of intermediate RAFSS habitat located west of the Project site and occur within the Upper Santa Ana River Wash Plan and HCP area. Along the southern boundary, 5.2 acres of intermediate RAFSS habitat will be avoided and permanently preserved on site. Another 86.4 acres of low quality intermediate RAFSS habitat, mixed with non-native grasses, is located off site between the Project's southern boundary and Mill Creek. Storm water drains that will be required for the Project will largely avoid impacting and fragmenting this area. Approximately 21.8 acres of intermediate RAFSS habitat will be lost along the western boundary from the realignment of Greenspot Road and the construction of storm water management facilities that will convey storm water to the Santa Ana River and through site development. Along the southern boundary, 2.5 acres of intermediate RAFSS habitat and 36.7 acres of mature RAFSS will be lost through site development and construction of storm water drains. Storm water drains required for the Project will result in limited impacts to offsite RAFSS habitat of approximately 1.5 acres. (RBF(b), p. 2) ~~A total of 31.8 acres RAFSS habitat occurring along Greenspot Road, including the RAFSS habitat west of Greenspot Road that supports the only population of SARWS found on the Project site, will be permanently preserved. Approximately 88.8 acres of RAFSS habitat (38.1 acres of intermediate RAFSS and 50.7 acres of mature RAFSS) will be lost through the Project development, including the off-site street improvements and storm water management facilities. (RBF(a), p. 41, 42)~~ The loss of 61.0 acres of RAFSS habitat (24.3 acres intermediate RAFSS and 36.7 acres of Mature RAFSS) will be mitigated through the restoration and enhancement of the 86.4 of low quality RAFSS habitat to high quality RAFSS habitat. (RBF(b), p. 2)

Mature RAFSS is RAFSS habitat that has become isolated from the fluvial processes of a drainage course and has become denser, more monotypic in structure, and populated with larger, woody plant species as a result. The fluvial processes are needed to maintain the openness of intermediate RAFSS habitat. This maturity process, in absence of the scouring effect of flooding, results in intermediate RAFSS habitat being converted to a distinctly different plant community, mature RAFSS. Without the fluvial processes mature RAFSS will continue to evolve to the more dense and woody species dominated Chaparral habitat. Mature RAFSS habitat is not known to support federally and state listed species such as SBKR, Santa Ana River woolly star and slender-horned spineflower found in intermediate RAFSS. None of these three species were found in the mature RAFSS habitat within or adjacent to the Project boundary. Intermediate RAFSS is more valuable biologically as it provides suitable habitat for listed species such as SBKR, Santa Ana River woolly star and slender–horned spineflower. Intermediate RAFSS is also more valuable from a conservation perspective as compared to mature RAFSS because it is very difficult and costly to restore mature RAFSS back to intermediate RAFSS and is not always successful. (RBF(b), p. 2)

The loss of intermediate RAFSS will be mitigated at a 2:1 ratio and the loss of mature RAFSS will be mitigated at a 1:1 ratio through restoration and enhancement of 86.4 acres of RAFSS to the southeast of the Project boundary, as described in **MM BIO 2**. The restoration and enhancement of the 86.4 acres of low quality primarily intermediate RAFSS habitat between the Project site and Mill Creek will provide a biologically superior preservation alternative to avoiding the existing mature RAFSS on-site. (RBF(b), pp. 2, 3) **Implementation of mitigation measure MM BIO 2 ~~5 is required to~~ will reduce the impacts to the loss of 61 ~~88.8~~ acres of RAFSS habitat to less than significant levels**.

Riversidean Alluvial Fan Sage Scrub Habitat Acreages

	Western Onsite Impacted	Western Offsite Impacted	Southern Onsite Impacted	Southern Offsite Impacted	Western Onsite Preserved	Western Offsite Preserved	Southern Onsite Preserved	Southern Offsite Preserved	Total
Pioneer RAFSS	0	0	0	0	0	0	0.0	1.9	**1.9**
Intermediate RAFSS	17.5	4.3	2.1	0	43.8	140.5	5.2	86.4	**300.2**
Mature RAFSS	0	0	36.7	0	0	0	14.1	3.0	**53.8**

Legend

- Project Boundary
- Grading Contours
- Preserved
- Impacted
- Pioneer RAFSS (1.9 Ac.)
- Intermediate RAFSS (300.2 Ac.)
- Mature RAFSS (53.8 Ac.)

GREENSPOT RD
SANTA ANA CANYON RD
SANTA ANA RIVER
GREENSPOT RD
MORTON FIRE RD
VILLARS ST
FLORIDA AVE
EMERALD AVE
GARNET ST
MILL CREEK
NEWPORT AVE
FISH HATCHERY RD
REDLANDS HEIGHTS RANCH RD
NEWPORT AVE
MILL CREEK
MILL CREEK RD
38

G:\2011\11-0160\GIS\RDEIR_RAFSS.mxd; Map revised Aug. 18, 2014.

Sources: RBF, Aug. 18, 2014;
San Bernardino Co., 2012

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Figure 5.4-6 – RAFSS Habitat Impacts
Harmony Specific Plan Recirculated Draft EIR

There are 673.5 acres of **Riversidean Sage Scrub** (RSS) habitat within the Project site. As stated previously, the RSS is occurring in various stages of disturbance and recovery: mature RSS, Buckwheat dominated disturbed RSS, Brittlebrush dominated disturbed RSS, Sagebrush dominated disturbed RSS, and highly disturbed RSS mixed with non-native grasses. The majority of the mature RSS (51.9 of the 55.5 acres or 94%) will be included in a large open space area that will be preserved at the northwest corner of the Project site that includes Morton Canyon. Another 132.2 acres of disturbed/successional RSS habitat (51.3 acres) and highly disturbed RSS habitat (80.9 acres) will be avoided during site development. (RBF(b), p. 6) (**Figure 5.4-7 – RSS Habitat Impacts**)

The majority (51.9 acres of the 55.5 acres or 94%) of mature RSS habitat will be preserved on-site, only 3.6 acres will be impacted by grading activities associated with the development of roads for the Project. Of the 210.2 acres of disturbed/successional RSS habitat, those areas of RSS habitat in various stages of successional development (Buckwheat dominated disturbed RSS, Brittlebush dominated disturbed RSS and Sagebrush dominated disturbed RSS), 158.9 acres or 76% will be lost through site development. Of the 407.8 acres of highly disturbed RSS habitat mixed with non-native grasses, 326.9 acres or 80% will be lost through site development. In total, 489.4 acres of RSS habitat will be lost through site development: 3.6 acres of mature RSS, 158.9 acres of disturbed/successional RSS, and 326.9 acres of highly disturbed RSS habitat mixed with non-native grasses. The loss of 3.6 acres or 6% of the 55.5 acres of mature RSS found on-site would be considered an adverse but less than significant impact due to the small amount of loss. (RBF(b), pp. 6-7) (**Figure 5.4-7**)

The majority of RSS habitat that will be lost through Project development (485.8 acres of 489.4 acres or 99%) has a history of extensive disturbance. Most of the RSS habitat found on-site has been either in agricultural production for decades or was used for borrow during the construction of Seven Oaks Dam. Both practices created extensive impacts to the natural topography by removing soils and native vegetation. Major fires have also periodically burned through the Project area, temporarily eliminating RSS cover. Today, the evidence of these past disturbances remains. The disturbed RSS found on-site contains sparser native vegetation or is more monotypic in nature without the diversified structure found with mature, undisturbed RSS habitat and has a greater concentration of non-native grasses. The plant composition and plant and wildlife species that were observed in the disturbed RSS habitat indicated that it is functioning more as an extension of the non-native grasslands found throughout the site and is not functioning as an undisturbed, mature RSS plant community. Due to these issues and the continued presence of invasive non-native grassland species, the highly disturbed RSS habitat is unlikely to develop into fully functioning RSS habitat in the future. Because of this disturbance and the limited function of these areas, the loss of this highly disturbed RSS habitat would be considered adverse, but a **less than significant impact**. (RBF(b), p. 7) Thus, no mitigation is required for impacts to RSS habitat.

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Various areas on the Project site support riparian vegetation found in association with the drainage features, irrigation channels, and excavated borrow pits. The Project site contains 9.2 ~~13~~ acres of **Southern Cottonwood Willow Riparian Forest**. This habitat is found along Morton Creek, in the northwest portion of the Project site abutting the San Bernardino Forest. It is a tall, multi-layered, open, canopy riparian community. This area provides suitable habitat for the southwestern willow flycatcher and the least Bell's vireo, both federally and state listed as endangered. (RBF(a), pp.15, 23, 24; RBF(b), p. 9) The southern cottonwood willow riparian forest associated with Morton Creek will be avoided. **No impacts to Morton Creek are anticipated as a result of Project implementation.**

The Project site contains 17.5 ~~15~~ acres of **Southern Willow Scrub/Mulefat Scrub** habitat which is located in the south central portion of the Project site. This portion of the site has been heavily modified by human disturbances, primarily the borrow site activities associated with the construction of the Seven Oaks Dam. The modified conditions have resulted in the development of a deep erosional feature or pit. This pit concentrates sufficient sheetflow runoff to support an isolated riparian plant community of willow trees and mulefat. (RBF(a), p.15; RBF(b), p. 9) Project development would result in the loss of 14.3 acres of the 17.5 acres of southern willow scrub/mulefat habitat identified on the Project site (**Figure 5.4-8 – Riparian Habitat Impacts**). **Implementation of mitigation measure MM BIO 5 is required to reduce the impacts to the loss of 14.3 acres of riparian habitat to less than significant levels**.

~~The Project site also contains a 5 acre depression or pond located in the central portion of the site north of Newport Avenue that retains water during the wet season. The ponded area is primarily un-vegetated. A limited amount of vegetation occurs along the north side of the pond and consists of an early seral community of mulefat (*Baccharis salicifolia*). (RBF(a), p.15)~~

As outlined above in Section 5.4.1.7 Jurisdictional Resources, the Project site contains 16 jurisdictional drainage features that were delineated using approaches recommended by the regulatory agencies for this site. The jurisdictional drainages include Morton Creek, the largest and most important drainage on site, Deep Creek, existing agricultural drainages created by historic agricultural use, natural landform drainages (do not exhibit a continuous bed-and-bank), and borrow site drainages (incised erosional features). Elderberry is found throughout the site. Where elderberry is located adjacent to CDFW jurisdiction limits were included in the CDFW jurisdictional mapping. (VCS, p. 16) The 17.5 ~~15~~ acres of Southern Willow Scrub/Mulefat Scrub habitat ~~and mulefat along the north side of the 5 acre depression/pond~~ identified in the vegetation mapping by RBF are included in the CDFW jurisdictional limits as this vegetation is considered riparian vegetation associated with the CDFW stream.

USACE jurisdiction totals of 2.31 acres and CDFW jurisdiction totals 47.81 acres within the Project site. The Project will avoid Deep Creek and Morton Canyon, including Morton Creek. Additional drainage features, or portions thereof, are located within Natural Open Space areas of the Project and will be avoided. Approximately 1.29 acres of non-wetland waters of the US under USACE jurisdiction and approximately 31.48 acres of streambeds and associated riparian vegetation under CDFW jurisdiction will be permanently impacted by implementation of the proposed Project (VCS, p. 18). **Implementation of mitigation measure MM BIO 4 is required to reduce impacts to approximately 1.29 acres of USACE non-wetland waters of the US to less than significant impacts**. **Implementation of mitigation measure MM BIO 5 is required to reduce impacts to approximately 31.48 acres of CDFW streambeds, as well as the 14.3 ~~88.9~~ acres of Southern Willow Scrub/Mulefat Scrub ~~RAFSS~~ habitat, to less than significant impacts**.

Riversidean Sage Scrub Habitat Acreages

	Impacted	Preserved	Total
Mature RSS	3.6	51.9	55.5
Brittlebush Dominated Disturbed RSS	27.0	40.3	67.3
CA Buckwheat Dominated Disturbed RSS	103.7	3.6	107.3
CA Sagebrush Dominated Disturbed RSS	28.2	7.4	35.6
Highly Disturbed RSS with NNG	326.9	80.9	407.8

Legend

- Project Boundary
- Grading Contours
- Preserved
- Impacted
- Mature RSS
- Brittlebush Dominated Disturbed RSS
- CA Buckwheat Dominated Disturbed RSS
- CA Sagebrush Dominated Disturbed RSS
- Highly Disturbed RSS with Non-Native Grasses

GREENSPOT RD
SANTA ANA CANYON RD
SANTA ANA RIVER
MORTON FIRE RD
GREENSPOT RD
VILLARS ST
FLORIDA AVE
GARNET ST
EMERALD AVE
MILL CREEK
NEWPORT AVE
NEWPORT AVE
REDLANDS HEIGHTS RANCH RD
MILL CREEK
MILL CREEK RD
38

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Sources: RBF, Aug. 2014;
San Bernardino Co., 2012

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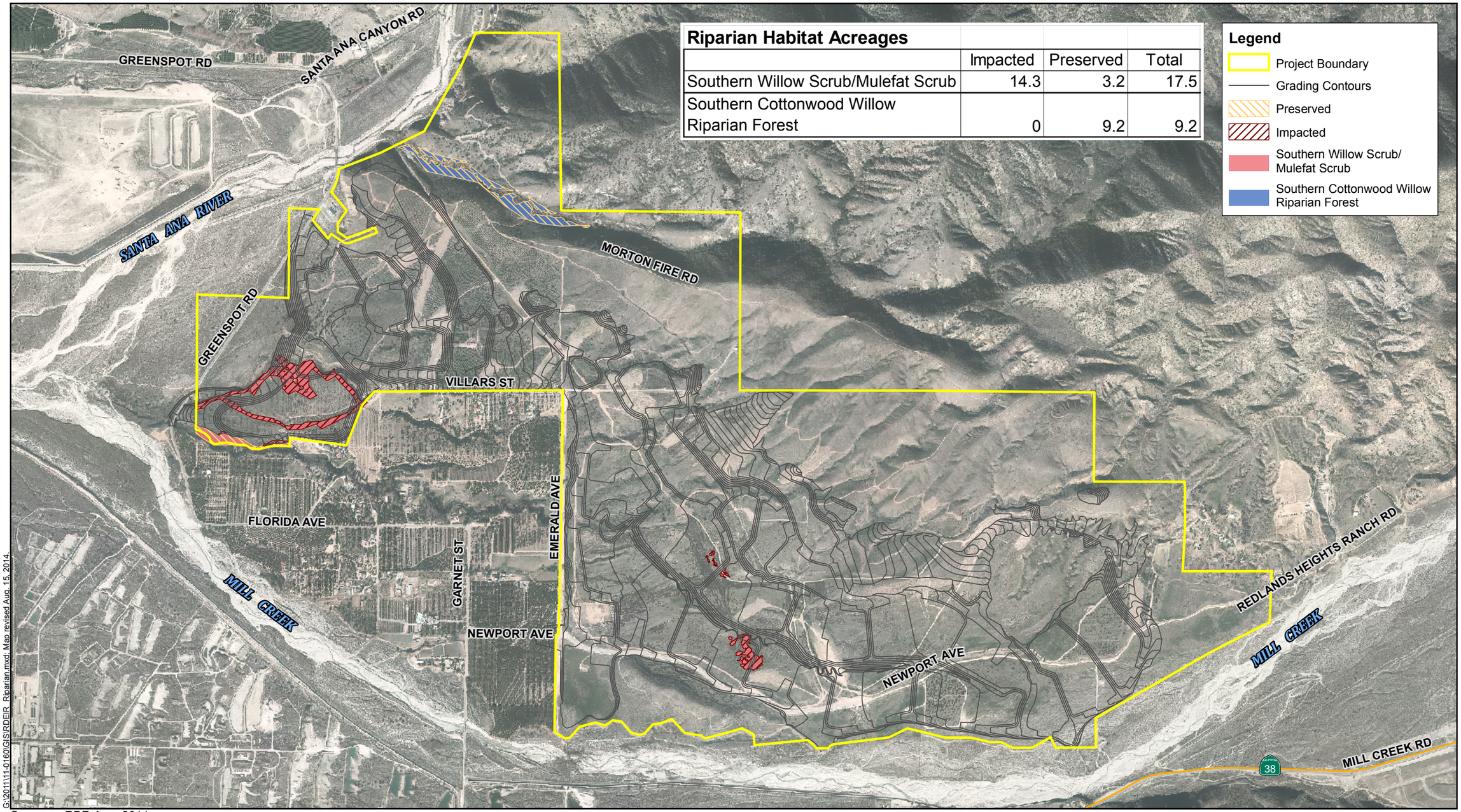
Figure 5.4-7 – RSS Habitat Impacts
Harmony Specific Plan Recirculated Draft EIR



Riparian Habitat Acreages

	Impacted	Preserved	Total
Southern Willow Scrub/Mulefat Scrub	14.3	3.2	17.5
Southern Cottonwood Willow Riparian Forest	0	9.2	9.2

Legend

- Project Boundary
- Grading Contours
- Preserved
- Impacted
- Southern Willow Scrub/ Mulefat Scrub
- Southern Cottonwood Willow Riparian Forest

G:\2011\11-0160\GIS\RDEIR_Riparian.mxd; Map revised Aug. 15, 2014.

Sources: RBF, Aug. 2014;
San Bernardino Co., 2012

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Figure 5.4-8 – Riparian Habitat Impacts
Harmony Specific Plan Recirculated Draft EIR

Threshold: *Would the proposed Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

As outlined in Section 5.4.1.7 Jurisdictional Resources above, a jurisdictional delineation was prepared for the entire Project site to determine the extent and location of jurisdictional drainages, including waters of the US regulated by the United States Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act. Waters of the US are defined to include waters, streams, and wetlands that have an above-ground or below-ground connection to navigable waters, and tributaries to these waters. In non-tidal waters, the limits of jurisdiction under this definition are defined by the ordinary high water mark (OHWM) identified through field observation of features such as shelving and debris deposits. USACE jurisdiction over non-tidal waters of the US extends to the OHWM or beyond the OHWM to the limit of any adjacent wetlands, if present. The USACE defines a wetland by three criteria: hydrology, soils, and vegetation.

The Project site contains 16 jurisdictional drainage features that were delineated using approaches recommended by the regulatory agencies for this site. The jurisdictional drainages include Morton Creek, the largest and most important drainage on site, Deep Creek, existing agricultural drainages, natural landform drainages (do not exhibit a continuous bed-and-bank), and borrow site drainages (incised erosional features). The Project is preserving the areas of Morton Creek and Deep Creek within the Project site as well as areas upstream of the development footprint along base of the foothills that are located in areas of the Project that will be Natural Open Space. Implementation of the Project will result in permanent impacts to approximately 1.29 acres of non-wetland waters of the US. These drainage features regulated by USACE as defined in section 404 of the Clean Water Act do not contain the three criteria for wetlands. (VCS, pp. 12- 18)

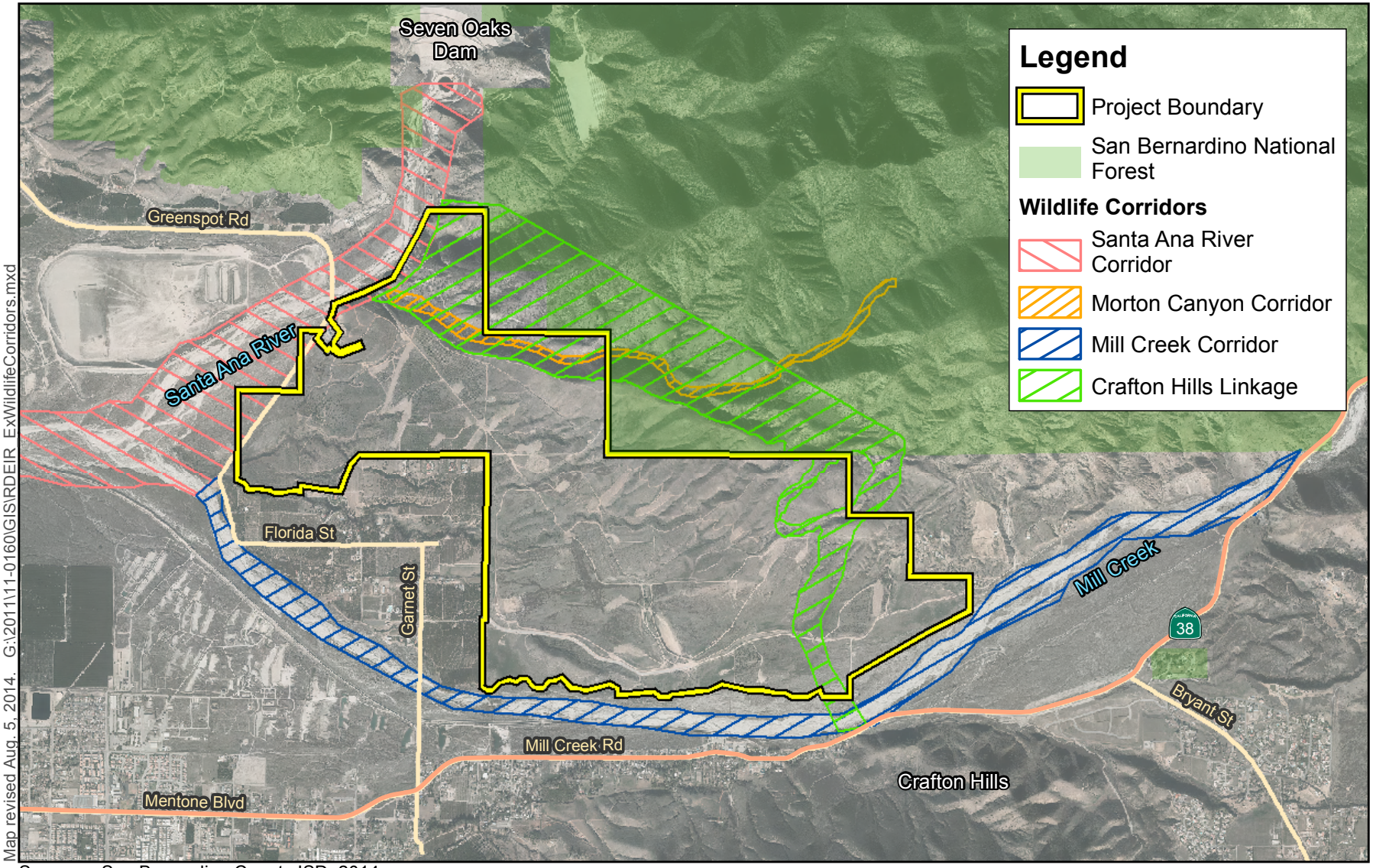
The Project site does not contain wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) and **Project implementation will not result in impacts to wetlands as defined by Section 404 of the Clean Water Act**.

Threshold: *Would the proposed Project 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?*

Wildlife corridors connect areas of similar habitat types and prevent habitat fragmentation. Habitat fragmentation diminishes an area's capacity to sustain healthy native wildlife populations. Wildlife corridors serve as conduits for animal movement and provide habitat and provide the important additional functions of genetic exchange between populations, as well as a source of animals to repopulated areas that may have suffered large losses of individuals from environmental changes and natural disasters. In general, research suggests that larger habitat patches and connectivity significantly improve habitat conditions for mammal species. South Coast Wildlands released a study in 2008 titled "South Coast Missing Linkages: A Wildland Network for the South Coast Ecoregions" that delineated regional wildlife movement corridors in San Bernardino County. (RBF(d), p. 1) ~~Wildlife movement corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain,~~

~~changes in vegetation by human disturbance, or by the encroachment of urban development. Movement corridors are important as the combination of topography and other natural factors, in addition to urbanization, has fragmented or separated large open space areas. The fragmentation of natural habitat creates isolated 'islands' of vegetation that may not provide sufficient area to accommodate sustainable populations and can adversely impact genetic and species diversity.~~

Two regional wildlife corridors have been identified by South Coast Wildlands within the vicinity of the Project site: 1) an east to west corridor along Mill Creek, south of the Project site; and 2) a wildlife corridor that follows the Santa Ana River into the San Bernardino Mountains. San Bernardino County's General Plan includes a map called "A Plan for Open Space and Trails for San Bernardino County," that included the above mentioned regional corridors~~, as well as 60 other wildlife corridors in San Bernardino County~~. The proposed Project site is adjacent to but outside of these two regional corridors—Mill Creek and the Santa Ana River. Although the Project site does not include any identified regional wildlife corridors, it is used for localized wildlife movement. ~~However, m~~Mule deer, mountain lion, bobcat, ~~and possibly~~ badger, and small mammals such as black-tailed jackrabbit ~~do~~ move from the San Bernardino National Forest, located along the northern boundary of the Project site, across the Project site, over Mill Creek and Highway 38 and then up into the Crafton Hills. Mule deer have been observed on the eastern portion of the property. ~~The presence of mule deer indicates that large mammals are migrating through the eastern portion of the property in order to gain access to Crafton Hills. Highway 38, outside of the site's southern boundary and bordering Mill Creek, does constrain but is not a blockage to wildlife movement.~~ Based on field observations and area topography, wildlife movement occurs primarily in the eastern portions of the Project site where the slopes of the San Bernardino Mountains are less severe, allowing better movement opportunities for larger mammals to travel out of the San Bernardino Mountains, across the eastern portion of the Project site, into Crafton Hills. (RBF(da), p. 1 ~~26, 27~~) **Figure 5.4-9 ~~5~~ – Existing Wildlife Corridors**, shows the location of existing wildlife movement/corridors through the Project site.



Map revised Aug. 5, 2014. G:\2011\11-0160\GIS\RDEIR_ExWildlifeCorridors.mxd

Sources: San Bernardino County ISD, 2014; RBF, 2014

Figure 5.4-9 – Existing Wildlife Corridors

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Based on coordination with local wildlife biologists, including Steve Loe, a retired San Bernardino National Forest Biologist who is familiar with wildlife movement corridors between the San Bernardino National Forest and Crafton Hills, the Project proposes a variable width wildlife corridor from a minimum of 900 feet to a maximum of 1,800 feet. The wildlife corridor will be located at the Project's eastern boundary and will continue to support the movement of wildlife between the National Forest and Crafton Hills. To accommodate the proposed wildlife corridor, the Project's development footprint will be shifted to the west, leaving a 900–1,800 foot wildlife corridor along the northern and eastern boundary of the site. (RBF(d), p. 2) ~~The proposed Project site does not encroach into Mill Creek or the Santa Ana River and, therefore, would not result in any impacts to wildlife movement along these regional corridors. Alternative movement corridors have been identified in coordination with wildlife biologists familiar with wildlife movement corridors between the National Forest and Crafton Hills that would accommodate the movement of wildlife between the National Forest and Crafton Hills. (RBF(a), p. 38)~~ **Figure 5.4-10 ~~6~~ – Proposed ~~Alternative~~ Wildlife Corridors~~**, shows the ~~two potential~~ corridor location~~s~~ for wildlife movement ~~corridors~~ across the eastern portion of the Project site.

Besides providing movement between the San Bernardino Mountains and the Crafton Hills, the corridor also provides connectivity between the eastern end of the Santa Ana River regional corridor, which now dead ends at Seven Oaks Dam, along the northern boundary of the Project site, and down to Mill Creek at the eastern boundary of the Project site. With the incorporation of this wildlife corridor into the Harmony Specific Plan and assurance of this corridor's long-term continuity, the Project will provide wildlife movement opportunities that are equal to or better than existing conditions by eliminating human interferences and providing ample cover for traveling animals~~. Implementation of the proposed Project would result in direct impacts to the existing Crafton Hills Linkage by placing residential development and associated infrastructure, including roadways, within the existing corridor footprint or path. As the proposed Project development would interfere substantially with the movement of any native wildlife species, including mule deer, mountain lion, bobcat, and possibly badger between the San Bernardino National Forest and Crafton Hills, i~~The wildlife corridor will be implemented~~ion~~ by ~~of~~ **mitigation measure MM BIO 6 ~~is required~~ to reduce direct ~~potential~~ impacts to ~~from direct interference with movement along the Crafton Hills Linkage~~ wildlife movement ~~corridor~~ to less than significant levels.**

Indirect impacts to wildlife movement would result from fuel modification/fire protection; flood control projects; new roads; and interface with residential development. The proposed Project would allow the development of a residential community in an area that supports Riversidean sage scrub throughout most of the undeveloped areas. Riversidean sage scrub is highly inflammatory and a Fire Protection Plan has been developed. However, both natural and manufactured open space would be established throughout the Project site. Natural open space would be preserved along the northern, southern and western Project boundaries. Manufactured open space would be created and maintained between the various phases of development, as well as between the different development units within each phase. The manufactured open space would be designed to avoid fire hazards through the use of a Master Plant Palette that provides a list of plants suitable to the area and that promotes habitat restoration, as well as provides fire protection. In addition, these manufactured open space corridors between

development units would provide corridors for wildlife movement both north and south, as well as east and west, through the Project site. All aspects of the Fire Protection Plan would be carefully researched against the requirements for maintaining an adequate wildlife habitat and movement corridor within the eastern portion of the Project site and designed to limit impact to wildlife movement to the maximum extent feasible, while maintaining Project fire safety. The manufactured open spaces will be permanently preserved as open space. (RBF(d), p. 2) Therefore**, indirect impacts from fuel modification/fire protection will be less than significant**. The performance standards included in **MM BIO 6 reduce indirect impacts from flood control projects, new roads, and the interface with residential development to less than significant levels**. ~~Natural Open Space would be preserved along the northern, southern and western Project boundaries. The existing vegetation in the proposed Natural Open Space along the boundary between proposed residential development and the Natural Open Space in the northern portion of the Project site is disturbed Riversidean Sage Scrub, which is highly inflammatory. The proposed Project would allow the development of a residential community in an area that supports sage scrub throughout most of the undeveloped Natural Open Space areas. Manufactured open space would be created and maintained in accordance with the Fire Protection Plan between the various phases of development, as well as between the different development units within each phase. A Manufactured Open Space area is proposed between the proposed development and the Natural Open Space to the north within the Alternative Wildlife Corridor Alternative 1 and 2 alignments. Indirect impacts to wildlife movement along the alternative alignments could occur at the Manufactured Open Space area if the plant palette selected does not provide appropriate habitat/cover for continued movement of the target wildlife species (mule deer, mountain lion, bobcat, and possibly badger). The manufactured open space would be designed to avoid fire hazards through the use of a Master Plant Palette that provides a list of plants suitable to the area and that promotes habitat restoration, as well as provides fire protection. All aspects of the Fire Protection Plan will be carefully researched against the requirements for maintaining an adequate wildlife habitat and movement corridor within the Project boundaries. In addition, these manufactured open space corridors between development units would provide movement corridors for wildlife movement both north and south, as well as east and west, through the Project site. (RBF(a), p. 37, 38) Indirect impacts to existing regional corridors outside the development footprint, including the Santa Ana River corridor, Mill Creek corridor and Morton Canyon Corridor could also occur if access to these areas are open to recreational and other unauthorized uses.~~ **~~With implementation of mitigation measure MM BIO 1, indirect impacts to existing regional wildlife corridors from unauthorized use would be reduced to less than significant impacts.~~**

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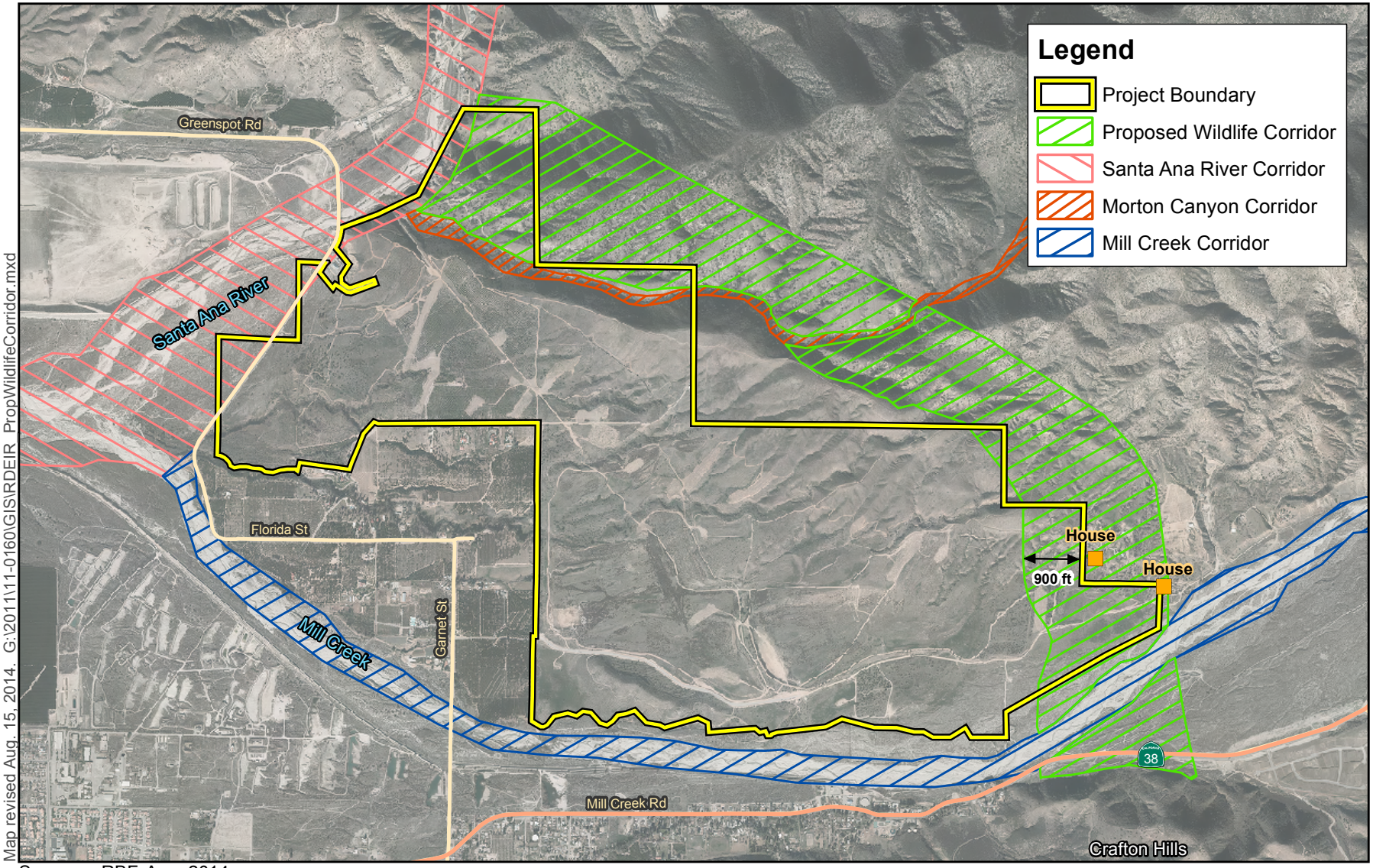

Map revised Aug. 15, 2014. G:\2011\11-0160\GIS\RDEIR_PropWildlifeCorridor.mxd

Sources: RBF, Aug. 2014.
San Bernardino Co., 2012;

Figure 5.4-10 – Proposed Wildlife Corridor
Harmony Specific Plan Recirculated Draft EIR

The proposed Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan. The Management Plan for the Santa Ana River Woolly Star (1993) is applicable to the Santa Ana River Woolly Star Preserve Area (WSPA), which was established in 1988 by the U.S. Army Corps of Engineers to provide mitigation to offset the impacts from the development of the Seven Oaks Dam at the top of the Santa Ana River. The proposed Project would not conflict with any of the recommendations or provisions contained within the Management Plan for the Santa Ana River Woolly Star, because the Preserve Area is west of the proposed Project area and would not be adversely affected by the implementation of the proposed Project. The proposed Project would also not conflict with the proposed Upper Santa Ana River Wash Land Management Plan (Wash Plan) and Habitat Conservation Plan (HCP) (January 2010). The Wash Plan/HCP Area is located west of the proposed Project area and would not be adversely affected by Project implementation. (RBF(a), p.44)

There currently is no regional Habitat Conservation Plan for the area in which the proposed Project is located. San Bernardino County has been hosting a series of preliminary planning meetings with local cities, key individuals and organizations, and the general public over the last two years to receive input on development of the proposed San Bernardino Valley-wide Multiple Species Habitat Conservation Plan (MSHCP). Although the proposed Project area would be expected to be within the County's MSHCP planning area, the Plan is still in the preliminary planning stage and it is not anticipated that USFWS will issue an individual take permit for this MSHCP any time in the foreseeable future. (RBF(a), p.44)

Therefore, the proposed Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan, and **no impacts would occur** in this regard. No mitigation is required. (RBF(a), pp.44, 45)

5.4.6 Proposed Mitigation Measures

An EIR is required to describe feasible mitigation measures which could minimize significant adverse impacts (State *CEQA Guidelines*, Section 15126.4). Mitigation measures were evaluated for their ability to eliminate or reduce the potential significant adverse impacts. The following measures shall be implemented to eliminate or reduce potentially significant impacts to sensitive biological resources to below the level of significance.

MM BIO 1: Several areas with sensitive habitats on the Project site will not be developed: 43.8 ~~31.8~~ acres of the RAFSS habitat supporting Santa Ana River Woollystar along the site's western boundary as well as the riparian habitats in Morton Canyon. Access to these areas will be restricted. An appropriate barrier/fence shall be installed to prevent unauthorized use. Educational signage shall also be posted to educate residents of the sensitivity of biological resources in each area, as well as the presence of a federal and state mandated conservation area to the west of the Project site, including the woolly star preserve area and the pending Upper Santa Ana River Wash and HCP.

MM BIO 2: In order to reduce potential direct impacts to SBKR from the loss of 61.0 acres of RAFSS habitat and indirect impacts from the release of storm water into the RAFSS habitat, the loss of ~~RAFSS~~

~~habitat~~ 24.3 acres intermediate RAFSS shall be mitigated at a 2:1 ratio and the loss of 36.7 acres of Mature RAFSS shall be mitigated at a 1:1 ratio through the restoration and enhancement of the 86.4 acres of low quality RAFSS habitat to high quality RAFSS habitat to the southeast of the Project boundary. The restoration and enhancement of the 86.4 acres of low quality, primarily intermediate RAFSS habitat between the Project site and Mill Creek will provide a biologically superior preservation alternative to the existing mature RAFSS habitat on-site. The restoration and enhancement of RAFSS habitat will be detailed in a Habitat Mitigation and Monitoring Plan (HMMP) that will be prepared as part of the regulatory permitting process for impacts to jurisdictional waters, as well as part of an Individual Take Permit (ITP) needed to address the loss of SBKR critical habitat through a Section 7 Consultation between the USACE and USFWS. The HMMP and ITP will include a management plan for all RAFSS habitat found along the Harmony project site's southern boundary and will be coordinated with the conservation planning efforts currently being finalized under the Upper Santa Ana River Wash Plan HCP. ~~by one or a combination of the following subject to USFWS and CDFW approval:~~

- ~~purchase of RAFSS habitat at a 2:1 ratio from the Cajon Creek Conservation Bank;~~
- ~~payment into the Riverside-Corona Resource Conservation District in-lieu fee program established for RAFSS habitat at a 2:1 ratio;~~
- ~~restoration and long-term management of onsite of mature RAFSS habitat to intermediate habitat at a 2:1 ratio;~~
- ~~and/or restoration and long-term management of off-site low quality RAFSS immediate south of the proposed storm drain facility to high quality RAFSS habitat at a 2:1 ratio.~~

MM BIO 3: Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Wildlife Code. If ground-disturbing activities or removal of any trees, shrubs, or any other potential nesting habitat are scheduled within the avian nesting season (nesting season generally extend from February 1 - August 31, but can vary from year to year based upon seasonal weather conditions), a pre-construction clearance survey for nesting birds, should be conducted within 7 days prior to any ground disturbing activities. This will ensure that no nesting birds will be disturbed during construction.

MM BIO 4: In order to reduce impacts from the loss of approximately 1.29 acres of waters of the US to less than significant levels this loss shall be mitigated by one or a combination of the following subject to USACE approval:

- purchase of mitigation credits at a 2:1 ratio, or the USACE agreed upon ratio, from an USACE approved Mitigation Bank;
- payment into the Riverside-Corona Resource Conservation District in-lieu fee program established for the loss of waters of the US at the agreed upon ratio;
- and/or the enhancement, conservation, and long-term management of onsite waters of the US at the agreed upon ratio. If restoration and enhancement of onsite ephemeral stream habitat is a selected option, implementation shall be detailed in a Habitat Mitigation and Monitoring Plan

(HMMP) that shall be prepared, reviewed and approved by USACE as part of the 404 permitting process.

MM BIO 5: In order to reduce impacts from the loss of approximately 31.48 acres of streambeds as well as the ~~88.8 acres of RAFSS habitat (38.1 acres of intermediate RAFSS habitat an d 50.7 acres of mature RAFSS habitat)~~ 14.3 acres of Southern Willow Scrub/Mulefat Scrub under CDFW jurisdiction to less than significant levels, this loss shall be mitigated by one or a combination of the following subject to CDFW approval:

- purchase of streambed and associated riparian habitat at a 2:1 ratio from the Cajon Creek Conservation Bank or other approved mitigation bank;
- payment into the Riverside-Corona Resource Conservation District in-lieu fee program (or other approved in-lieu fee program) established for the loss of streambed and associated riparian vegetation at a 2:1 ratio;
- restoration and long-term management of onsite streambeds and associated riparian vegetation at a 2:1 ratio;
- and/or restoration and enhancement ~~long-term management~~ of equivalent riparian ~~off-site low quality~~ habitat ~~streambed and associated riparian vegetation to high quality habitat~~ at a 2:1 ratio. If restoration and enhancement of riparian habitat is a selected option, implementation shall be detailed in an HMMP that shall be prepared, reviewed, and approved by CDFW as part of the Streambed Alteration Agreement process.

MM BIO 6: In order to reduce Project impacts to ~~from the Project on existing Crafton Hills Linkage~~ wildlife movement, the proposed ~~corridor a~~ wildlife movement corridor (selected in cooperation with local wildlife biologists) shall be developed in the eastern portion of the Project site that shall meet the following requirements:

- Provide connectivity between the San Bernardino Mountains and Crafton Hills, two areas of similar and naturally occurring habitats that were once contiguous wildlife habitat prior to human development in the region, including Highway 38;
- Provides ~~a~~ needed avenue for genetic interchange, both for wildlife, as well as plant species;
- Identifies~~y~~ a conduit or wildlife movement corridor in response to environmental changes and natural disasters; and
- Provides a source of ~~Allow~~ individuals of a species to re-colonize an area such as the Crafton Hills if ~~from which~~ they may become extirpated in that area.

The size and shape of a corridor can directly impact the effectiveness of the corridor for wildlife movement. Although there are no hard guidelines for corridor design, the following performance standards were used to select the locations ~~shall be used to identify the wildlife corridor alignment~~ and shall continue to be used to finalize its design, as well as to implement an effective monitoring/adaptive management program to ensure its long-term ~~determine its ongoing~~ suitability for providing movement

opportunities and connectivity for wildlife between the San Bernardino Mountains and the Crafton Hills. These performance standards follow the six-step checklist outlined by Beier and Loe (1992):

1. The width of wildlife corridors should be based on an assessment of existing site conditions, use of the site by targeted wildlife species, a review of existing scientific literature on wildlife corridor and coordination with local experts on wildlife movement. A comprehensive review of the scientific literature on wildlife corridors by the state of Oregon's Metro Sustaining Center (2010) found that effective movement corridor widths can range in width from a few feet to over a thousand feet. They found that several studies on general wildlife corridors recommend that corridors be at least 328 feet (100 meters) wide to provide opportunity for most wildlife movement and habitat functions. Carnivores and large mammals tend to require wider corridors. Therefore, the proposed wildlife corridor will be 900 feet at a minimum up to a maximum of 1,800 feet along the eastern boundary, which is wide enough to accommodate the likely users of the wildlife corridor, including mule deer, mountain lions, bobcats, American badger, and small mammals.

2. Habitat quality is an important corridor attribute and can be crucial in contributing to the corridor's functionality. The proposed corridor is currently vegetated with a naturally occurring Riversidean Sage Scrub plant community that provides plant species similar to those areas in the San Bernardino Mountains and in the Crafton Hills being connected by the corridor. This vegetative structure will be maintained so that it continues to attract the target species and encourage their movement through the corridor.

3. The target species that require movement opportunities between the San Bernardino Mountains and Crafton Hills include mule deer, mountain lion, bobcat, American badger, and black-tailed jackrabbit. The proposed wildlife corridor has been designed for the large mammal species, mountain lion and mule deer, and will be sufficient in width and location to support the demand for wildlife movement for the above species between the San Bernardino Mountains and the Crafton Hills. Currently, various impediments to wildlife movement exist on the Project site, including dirt roads, off-highway vehicle uses, lack of cover, lack of water, and ongoing site disturbances. The dedicated wildlife corridor will improve wildlife movement opportunities as compared to existing conditions by reducing most human interferences and providing ample cover for traveling animals.

4. The corridor location and design will ensure that:

    a. Large mammals are expected to be able to encounter and use the corridor. The entrance to the proposed corridor is a continuation of the existing corridor from the San Bernardino Mountains already in use. With the preservation of the existing topography and the plant communities, wildlife movement between the San Bernardino Mountains and the Crafton Hills will not be interrupted.

    b. The habitat within the corridor will remain in its natural condition except some areas that will need to be re-vegetated after initial grading. The site will continue to attract the target species and encourage their movement through the corridor.

c. The large width, up to 1,800 feet, of the corridor, as well as the preservation of the natural habitats within the corridor will continue to provide sufficient shelter, food and water for wildlife to move through the corridor. Enhancement and restoration measures such as re-vegetation to restore baseline conditions, documented at the opening of the corridor, following flood events and wild fires will be included in a long-term management plan.

d. The corridor has been designed to reduce impediments to the use of the corridor such as human activity, road crossings, fencing, and stream channelization. Two existing roads have existed for decades within the eastern portion of the Project site and have not impeded wildlife movement through the area. These two existing at grade roads will be included in the proposed corridor in order to provide access to residences east of the Project site. The long-term management plan will include guidelines for maintaining these two at grade roads while continuing to recognize the movement of wildlife through the area.

5. Long-term management guidelines will be specified and will include:

   a. Maximize land uses adjacent to the corridor that reduce human impacts to the corridor;

   b. Do not allow housing or other impacts to project into the corridor to form impediments to movement and increase harmful edge effects;

   c. Strict lighting restrictions for houses adjacent to the corridor to prevent light pollution into the corridor will be imposed. Lights must be directed downward and away from the corridor;

   d. No domestic pets, off-road vehicles, or recreational activities will be allowed in the corridor;

   e. No feeding of wildlife animals will be allowed; and

   f. Landowners adjacent to the corridor will be educated about the presence of the wildlife corridor and restrictions regarding the use of the area.

6. A monitoring program will be included in the long-term management plan that will ensure the proposed corridor is providing suitable habitat and that it is functioning and providing wildlife movement opportunities. The monitoring program will assess animal use of the corridor both before, during and post construction of the Project for a period not to exceed five years after Project completion. The monitoring program will be funded for five years by the Project Applicant. The monitoring program shall be overseen by the City and an Advisory Committee of 5, including a City designee, and Applicant designee, the Project biologist, and additional members mutually selected by the City and Applicant. The Advisory Committee shall submit annuals reports to the City. If a majority of the Advisory Committee members determine that the wildlife corridor is not functioning in accordance with the performance standards listed below, the Advisory Committee may require the implementation of adaptive management provisions, which shall be selected by a majority of the Advisory Committee members, in consultation with the City and the Project Applicant.

Biological monitoring will ensure consistency and will be measured against the following performance standards:

- Exotic vegetation within the wildlife corridor will not be allowed to exceed 30 percent as measured against the baseline conditions documented at the opening of the corridor.
- The overall plant structure and diversity within the corridor will be maintained at baseline levels and should not deviate from baseline conditions by over 20 percent.
- Wildlife entry into corridor and movement through the corridor should continue or exceed baseline levels as measured against the baseline conditions documented at the opening of the corridor. A drop of 20 percent in use of the corridor should be investigated to explain the observed decrease and/or to develop corrective actions for impacts that occur within the property.
- Openness of vegetation in the corridor should be maintained at baseline levels. An increase or decrease in plant density that exceeds 10 percent from baseline levels will be investigated to explain the observed change in density/openness and to determine if corrective measures are needed.
- External factors such as lighting and the use of the two existing at grade road crossings that must remain in place to provide access for residences to the east will be assessed annually against movement levels through the corridor to determine if lighting and the use of the existing at grade roads are having an adverse effect on wildlife use of the corridor. A decrease of 20 percent will be investigated to explain the decrease and/or to develop corrective actions that can be feasibly implemented.

~~1. A wildlife corridor at least 300 feet wide shall be established and vegetated with plant species similar to those areas in the San Bernardino Mountains and in the Crafton Hills being connected by the corridor;~~

~~2. Target species shall be identified that require movement opportunities between the San Bernardino Mountains and Crafton Hills;~~

~~3. The movement and dispersal patterns, including seasonal migration patterns, for each target species or species of interest can be shown to be routinely migrating between the San Bernardino Mountains and Crafton Hills;~~

~~4. The corridor shall be designed to accommodate movement by large mammals, in particular, mule deer, mountain lion, bobcat and American badgers;~~

~~o Large mammals can expected to be able to encounter and use the corridor;~~

~~o The habitat within the corridor shall be conducive to attracting the identified large mammals and to encourage movement through the corridor;~~

~~o The corridor shall be created to provide sufficient shelter, food and water for wildlife to move through it; and~~

~~o The corridor shall be designed to avoid, where feasible, impediments to the use of the corridor such as human activity, road crossings, fencing, and stream channelization. Two existing road crossing will be maintained to provide access from the Project site to residential developments to the east.~~

~~5. Specific management guidelines shall be specified that include:~~

~~o Restrictions on land uses within and adjacent to the corridor;~~

~~o Domestic pets, off-road vehicles, lighting, and recreational activities will be not permitted within the wildlife corridor; and~~

~~o Two future road crossings will be allowed at grade to provide access to residences to the east of the Project site, however, the location and design shall incorporate measures to minimize impacts to wildlife use of the corridor.~~

~~6. A monitoring program shall be included to ensure the selected/implemented corridor is functioning and providing wildlife movement opportunities. The monitoring program shall assess animal use of the corridor both before and post construction of the Project for a period not to exceed five years after Project completion and will be managed by the City of Highland.~~

MM BIO 7: In order reduce direct impacts to LBVI resulting from the loss of 2.4 acres of southern willow scrub/mulefat scrub, acquisition of an Individual Take Permit (ITP) from both the CDFW and USFWS shall be required prior to development within the area. As part of preparing ITPs (Section 7 Consultation under the Federal Endangered Species Act and Section 2081 under the California Endangered Species Act), biologically equivalent LBVI habitat will be preserved and managed in perpetuity, either on-site and/or within the general vicinity to offset impacts from the loss of this 2.4-acres of LBVI occupied riparian habitat. Potential suitable locations include the existing LBVI habitat along Mill Creek, south the Project site, and along the Santa Ana River, west of the Project site. Additionally, existing riparian habitats along the upper end of the Santa Ana River, west of the Project, as well as LBVI occupied habitats within Morton Canyon in the northern portion of the Project site, could be enhanced. A Habitat Management Plan(s), as well as a Property Analysis Record (PAR), shall be prepared documenting all required management actions and defining funding requirements to ensure the long-term management of all identified mitigation site(s). All sites considered for potential mitigation will be evaluated to determine if they are biologically equivalent in size and habitat quality to existing conditions:

- Vegetation within the mitigation site will consist of riparian plants representative of southern willow scrub and mulefat scrub.
- Each selected mitigation site(s) will be evaluated for its management ability and long-term conservation value.
- Selected sites should be acceptable to CDFW and USFWS as part of the conservation requirements of their ITP applications.
- Several potential mitigation areas are available and include:
  - Entrance to Morton Canyon off of the Santa Ana River

- Morton Canyon
- Riparian Habitats along Mill Creek at the southwest corner of the Project site
- Riparian Habitats along the Santa Ana River west of the Project site
- Riparian Habitats along the Santa Ana River at its confluence with Mill Creek
- Creation of riparian areas within the flood control facilities along the Project site's southern and western boundaries.

The mitigation site shall be selected and presented to CDFW and USFWS for approval prior to disturbance within this area. The Project applicant shall purchase the selected mitigation site, if necessary, within one year of approval of the site by CDFW and USFWS.

5.4.7 Summary of Project-Specific Environmental Effects after Mitigation Measures are Implemented

The proposed mitigation measures will ensure that the proposed Project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as endangered, threatened, candidate, sensitive or special status species, or on riparian habitats or other sensitive natural communities, or interfere substantially with a wildlife corridor. With the above mitigation measures implemented, impacts to sensitive biological resources will be reduced to a **less than significant level**.

5.4.8 Summary of Cumulative Environmental Effects after Mitigation Measures are Implemented

Section 7.1.7 of the DEIR contains further information regarding cumulative effects.

An evaluation of whether an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that substantially diminish or result in the loss of an important biological resource, or those that would conflict with local, State, and/or Federal resource conservation plans, goals, or regulations. Impacts can be locally adverse but not significant because, although they would result in an adverse alteration of existing conditions, they would not substantially diminish or result in the permanent loss of an important resource on a population- or region-wide basis. (RBF(a), p.45)

The cumulative impacts associated with the proposed Project and surrounding areas, where similar types of development are occurring or proposed, would be considered less than significant due to the minimal amount of permanent loss of intact biological habitat or sensitive species that depend on these resources, permanent preservation of 535 acres of open space throughout the Project site, as well as the mitigation measures that would mitigate impacts to biological features. (RBF(a), p.45)

Section 7 of this DEIR contains a list of approved or planned future projects within the City of Highland (**Table 7-A – Cumulative Development Projects**). In addition to this list of cumulative projects, another reasonably foreseeable project to be initiated by the City of Highland is the potential development of a bridge over Mill Creek at the southeast corner of the Project site connecting to Highway 38. The location

of a potential bridge is shown in **Figure 5.4-11 – Potential Mill Creek Bridge Impacts to Wildlife Corridors**. These projects in combination with the proposed Project may contribute to cumulative biological impacts in the City. However, according to the CEQA Guidelines, determining whether to include a related project should include the nature of each environmental resource being examined, the location of the project and its type. The cumulative analysis should also define the geographic scope of the area affected by the cumulative effect. Considering the biological resources affected by the proposed Project, in particular, to wildlife corridors and movement, related projects should focus on those developments located along the Santa Ana River corridor. (RBF(a), p.45)

As noted, the area with **Santa Ana River Woollystar** (SARWS) is immediately adjacent to an area that is being set aside for conservation by San Bernardino Valley Water Conservation District and other agencies and municipalities as part of the Upper Santa Ana River Wash Plan and Habitat Conservation Plan. The Plan provides permanent protection and long-term management for the area. **No cumulative impacts** have been identified for this area that could adversely affect this existing population of SARWS. (RBF(a), p. 45)

The proposed Project site does not contain slender-horned spineflower and **would not result in cumulative impacts to slender-horned spineflower**. (RBF(a), p. 45)

The RAFSS habitat south of the Project site occurs as a narrow band of bench habitat bordering Mill Creek and is located immediately adjacent to the Project's southern boundary. Those portions of RAFSS habitat within the Project boundaries would not be developed and would be maintained as permanent open space. Approximately 2.1 of the 7.3 acres of this intermediate RAFSS habitat extends into the southeast corner of the Project site and would be developed. Approximately 36.7 of the 53.8 acres of mature RAFSS habitat extends into the southeast corner of the Project site and would be developed (RBF(b), p. 2). ~~However, no cumulative impacts beyond this direct impact have been identified for this area that could adversely affect RAFSS habitat and/or SBKR. There are no known plans to develop on the banks or within Mill Creek.~~ Construction of a potential bridge across Mill Creek would impact intermediate RAFSS habitat and critical habitat for SBKR and Santa Ana sucker, as shown in **Figure 5.4-12 – Potential Mill Creek Bridge Impacts to Criteria Habitat and Jurisdictional Waters** and **Figure 5.4-13 – Potential Mill Creek Bridge Impacts to RAFSS**. The RAFSS habitat is known to support Santa Ana River woolly star and slender-horned spineflower. Loss or adverse modification of critical habitat will trigger the requirement for an Individual Take Permit (ITP) from both USFWS and CDFW. Preparation of a Streambed Alteration Agreement from CDFW and acquisition of an ITP as well as adherence to the potential design features listed below, under the discussion for wildlife corridors, may be considered during the City's planning process to reduce these impacts. Ultimately, it is up to the City's discretion to select the location for the proposed bridge, and it will be the City's responsibility to evaluate the environmental impacts associated with constructing the bridge in the selected location as part of a separate project, distinct from the Harmony Specific Plan project. This information on potential bridge locations and impacts is being provided in for informational purposes only. ~~**No cumulative impacts have been identified for this area that could adversely affect RAFSS habitat and/or SBKR.**~~ (RBF(a), pp. 45, 46; RBF(e), pp. 2, 3)

Although the Project site has been subjected to extensive agriculture use and used as a borrow area, there are various stages of Riversidean ~~coastal~~ sage scrub (~~C~~RSS) on the Project site, which could support CAGN. CAGN historically occurred on the Project site, however, its population has been significantly reduced or eliminated from the long-standing agricultural use of the area, as well as the use of the site for borrow material for construction of the Seven Oaks Dam. **No cumulative impacts have been identified for this area that could adversely affect CAGN**. (RBF(a), p. 46)

The Project site abuts with the National Forest boundary along its northern boundary. As noted, the northern portion of the Project site, the area immediately adjacent to the National Forest Service boundary, would not be developed. There are no known plans to develop land between the northern boundary of the Project footprint and the National Forest boundary. **No cumulative impacts have been identified for this area that could adversely affect SWWF or LBVI**. (RBF(a), p. 46)

The proposed Project site does not support burrowing owls and **would not result in cumulative impacts to burrowing owl**. (RBF(a), p. 46)

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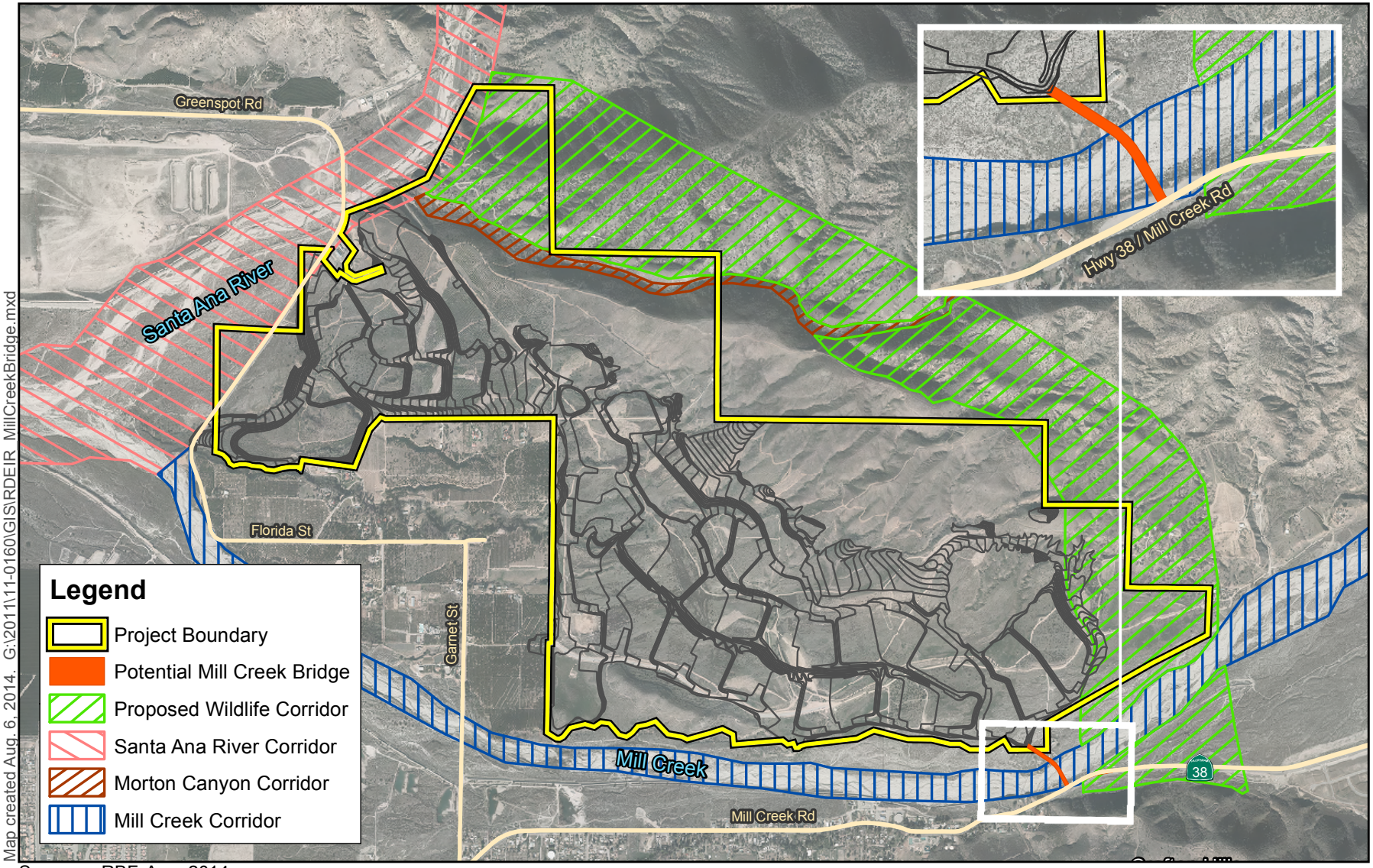

Sources: RBF, Aug. 2014.
San Bernardino County ISD, 2012;

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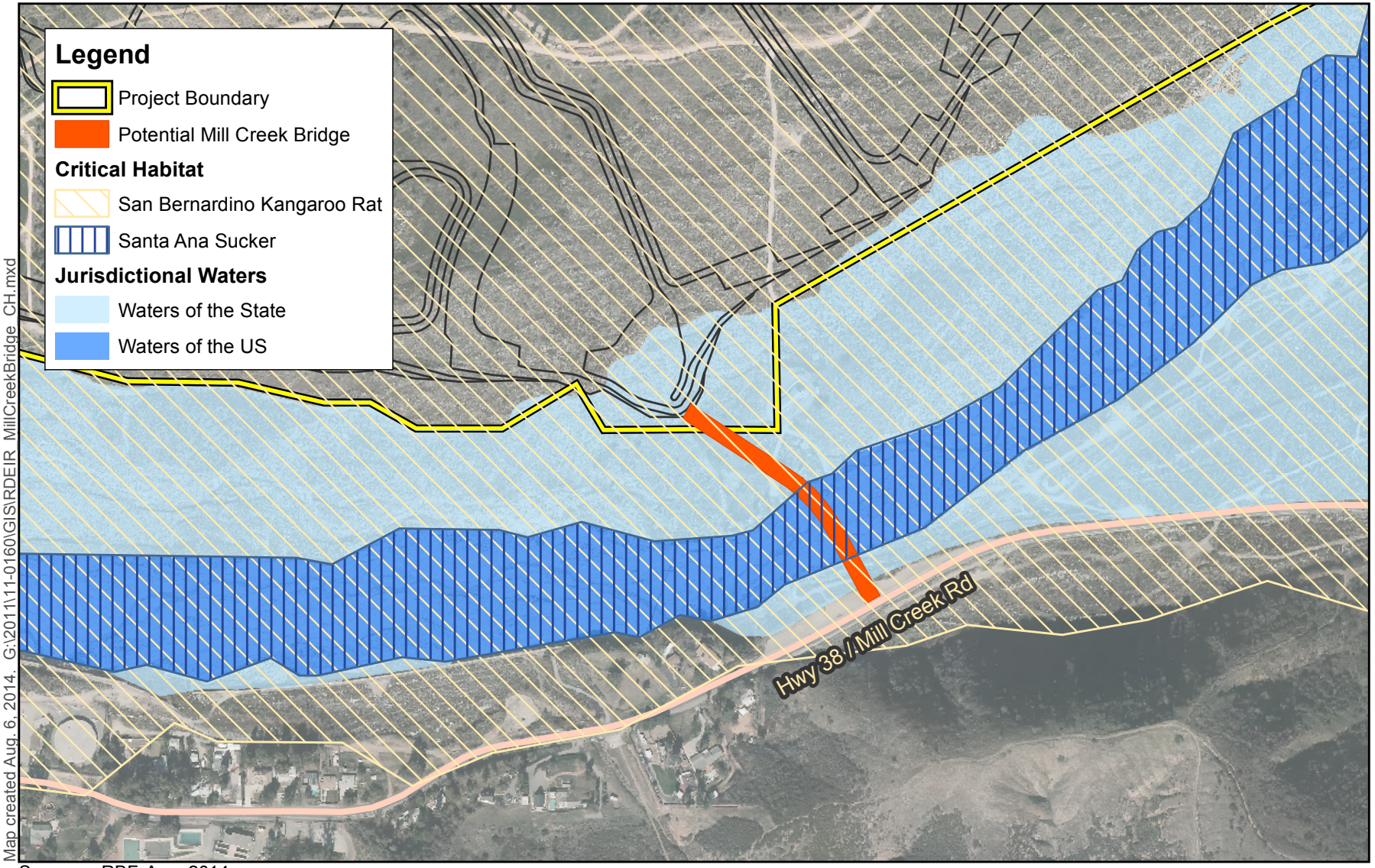
Figure 5.4-11 – Potential Mill Creek Bridge Impacts to Wildlife Corridors

Harmony Specific Plan Recirculated Draft EIR



Map created Aug. 6, 2014. G:\2011\11-0160\GIS\RDEIR_MillCreekBridge_CH.mxd

Sources: RBF, Aug. 2014.
San Bernardino County ISD, 2012;

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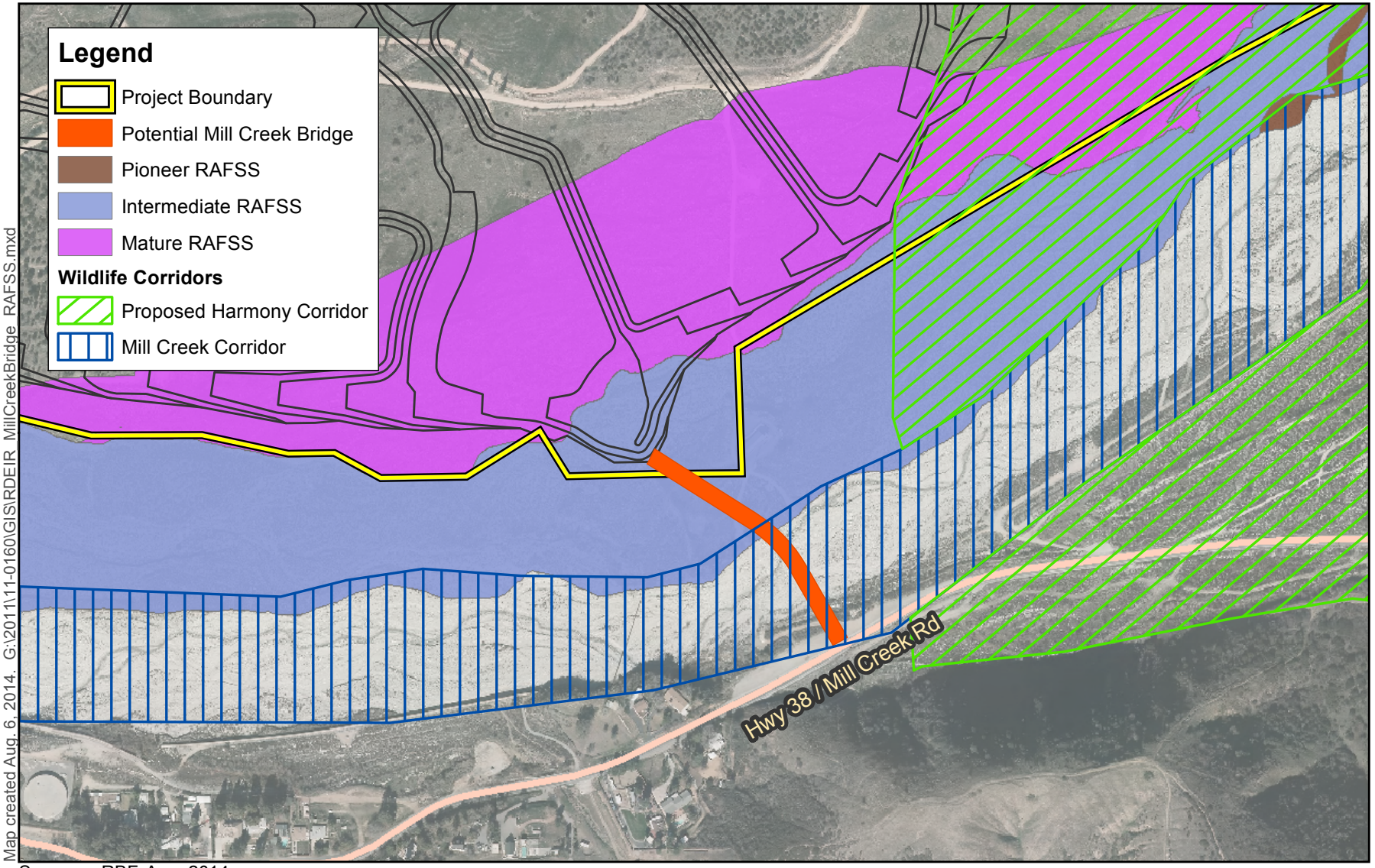
Figure 5.4-12 – Potential Mill Creek Bridge Impacts to Critical Habitat and Jurisdictional Waters

Harmony Specific Plan Recirculated Draft EIR



Sources: RBF, Aug. 2014.
San Bernardino County ISD, 2012;

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Figure 5.4-13 – Potential Mill Creek Bridge Impacts to RAFSS

Harmony Specific Plan Recirculated Draft EIR

There are no known plans to develop within the riparian habitats adjacent to the western and southern boundaries of the Project site. Implementation of mitigation measure **MM BIO 5 ~~6~~** reduces Project impacts to riparian habitats to less than significant levels. **No cumulative impacts have been identified for this area that could adversely affect riparian habitat.** (RBF(a), p. 46)

As outlined above, implementation of the Project will not adversely affect regional wildlife corridors in or adjacent to the site including Santa Ana River Corridor, Mill Creek Corridor, and the Morton Canyon Corridor. The Project will ~~adversely~~ affect the existing ~~Crafton Hills Linkage~~ corridor connecting the San Bernardino National Forest with the Crafton Hills; however, implementation of mitigation measure **MM BIO 6 ~~7~~** will reduce impacts to this corridor to less than significant levels. Construction of a potential bridge across Mill Creek could impact jurisdictional waters and bisect the designated Mill Creek Regional Corridor. Adherence to the potential design features listed below and the development and acquisition of a Streambed Alteration Agreement, a Clean Water Act 404/401 permit and certification, and ITPs during the City's planning process may reduce these impacts. Ultimately, it is up to the City's discretion to select the location for the proposed bridge, and it will be the City's responsibility to evaluate the environmental impacts associated with constructing the bridge in the selected location as part of a separate project, distinct from the Harmony Specific Plan project. This information on potential bridge locations and impacts is being provided for informational purposes only (RBF(e), p. 3) ~~Cumulative development within the Crafton Hills Area could result in potential impacts to the movement of wildlife along the Mill Creek corridor. **The proposed Project would not significantly contribute to cumulative impacts to wildlife corridors because Project impacts would be offset by the mitigation measures described above.** (RBF(a), p. 46)~~

Potential design features that may be considered by the City in its engineering design for a road from the Project site and a bridge over Mill Creek to Highway 38 may include:

- Locating the planned access road from the southeast corner of the Harmony Specific Plan site in the least environmentally sensitive location by following the alignment of an existing dirt road to avoid loss of additional habitat and to minimize any additional habitat fragmentation.
- Avoiding impacts to the federally and state listed species known to occur within the RAFSS habitat associated with Mill Creek.
- Conducting construction, maintenance and operation activities that involve clearing of vegetation outside of active breeding season (February 1 through August 31) or when cleared by a biologist prior to initiating ground disturbing activities.
- The planned road could be designed to consider wildlife movement requirements as outlined below:
    - Fencing or lining the road with tall dense vegetation to discourage wildlife from crossing the access road.
    - Providing sufficient clearance, both laterally and vertically to accommodate large wildlife (e.g., mountain lion and mule deer) to assure consistent movement within the Mill Creek Regional Wildlife Movement Corridor. A minimum height of 3 to 4 meters should be maintained for mountain lion and mule deer crossings.

- Direct lighting on to the road along the access road and at the bridge.
- Maintaining the RAFSS habitat under the bridge in its natural state to mimic the surrounding natural area.
- Prohibiting trails under the bridge, since they can deter wildlife movement under the bridge.
- Placing pylons or other support structure for the bridge, to avoid or minimize effects on sediment transport.
- Adopting project specific construction BMP's should also address wildlife movement through the area during the construction phase for both the exit road and bridge.

5.4.9 References

In addition to other documents, the following references were used in the preparation of this section of the DEIR:

RBF(a) RBF Consulting, *Habitat Assessment Greenspot Property*, March 2014. (Appendix D.1)

RBF(b) RBF Consulting, *Sensitive Habitats Analysis*, August 2014. (Appendix P.1)

RBF(c) RBF Consulting, *Results of Least Bell's Vireo (Vireo belli pusillus) Surveys for the Harmony Specific Plan (Greenspot Property) Located in the City of Highland, San Bernardino County, California*, July 31, 2014. (Appendix P.2)

RBF(d) RBF Consulting, *Results of a Wildlife Corridor Analysis for the Harmony Specific Plan (Greenspot Property) Located in the City of Highland, San Bernardino County, California*, July 31, 2014. (Appendix P.3)

RBF(e) RBF Consulting, *Mill Creek Bridge Analysis*, August 2014. (Appendix P.4)

Code City of Highland, Highland Municipal Code, (Available at http://www.codepublishing.com/ca/highland/, accessed on January 29, 2014.)

GP City of Highland, *General Plan,* March 2006. (Available at http://www.ci.highland.ca.us/GeneralPlan/PDFs/05-Conservation_&_OS.pdf, accessed August 11, 2011.)

HSP City of Highland, *Harmony Draft Specific Plan*, March 2014. (Available at the City of Highland.)

VCS VCS Environmental, *Greenspot Jurisdictional Delineation Report*, October 2012. (Appendix D.2)

Updates and Revisions to Section 5.16, Transportation/Traffic

Newport Road between Garnet Street and New Greenspot Road has been designated as Modified Alternative Highway D. Modified Alternative Highway D has a total ROW of 66 feet, including one, 14-foot travel lane in both directions. Both sides of the street include a 4-foot sidewalk separated from the curb by a parkway. East of New Greenspot Road, Newport Road is designated as a Modified Collector G with a total ROW of 80 feet, which includes one, 14-foot travel lane in each direction separated by a 12-foot raised median. On one side of the street is an 8-foot parking lane and on the other side is an 8-foot shoulder, a 10-foot Class 1 Bikeway/Pedestrian Path, and 2-foot landscape transition area, separated from the street by an 8-foot vegetated swale and an additional 2-feet of transition area. The other streets within the Project site boundaries will be two-lane collector streets of various types. (LSA, p. 50)

As shown in Table FFFF of the TIA, all study area intersections are projected to operate at a satisfactory LOS under build-out of the Project either with or without the potential development of Newport Avenue/SR-38 Connection. It should be noted that at the request of the City, internal intersections proposed to be developed with a traffic roundabout were also analyzed as conventional intersections. (LSA, p. 52)

Summary of Project Impacts on Roadway Intersections

With development of each phase of the Project, potentially significant impacts will occur at off-site roadway intersections in the study area, as shown in the preceding analysis. As a result, circulation improvements have been identified in the TIA that are necessary obtain the target LOS. Most of the recommended improvements are included in the SANBAG Nexus Study or the Development Impact Fee programs for the jurisdictions where the intersections are located. **Table 5.16-J** shows the unsatisfactory intersections and the improvements required. **Table 5.16-K** shows a summary of all off-site improvements along Greenspot Road with Project traffic conditions for each traffic scenario analyzed in the TIA. **Table 5.16-L** shows a summary of off-site improvements along Garnet Street, SR-38, and Bryant Street with Project traffic conditions for each traffic scenario analyzed in the TIA and **Table 5.16-M** shows a summary of off-site improvements at other intersections with Project traffic conditions for each traffic scenario. **Tables 5.16-K** through **5.16-M** summarize off-site improvements for TIA intersections only.

Additional Analysis of San Bernardino Avenue

A supplemental analysis was conducted for intersections along San Bernardino Avenue near Citrus Valley High School at the request of the City of Redlands although the SANBAG CMP guidelines do not require the analysis of these intersections because the Project does not add 50 peak hour trips to these intersections (Appendix Q.1 of this Recirculated DEIR). The City contends that students from the Project will attend Citrus Valley High School and then use San Bernardino Avenue to access the SR-210 ramps. Based on information from Redlands Unified School District (RUSD), it is unlikely that students from the Project will enroll in Citrus Valley High School, and instead attend Redlands East Valley High School. Since the Project area falls within the boundaries for Redlands East Valley High School, this analysis also includes an analysis of intersections that would be used to access Redlands East Valley High School.

The volume development and other analyses methodologies are consistent to those used in the TIA for the Project. The following nine intersections were evaluated:

1. SR-210 Eastbound Ramps/San Bernardino Avenue
2. SR-210 Westbound Ramps/San Bernardino Avenue
3. Texas Street/Pioneer Avenue
4. Texas Street/San Bernardino Avenue
5. Orange Street/Pioneer Avenue
6. Orange Street/San Bernardino Avenue
7. Opal Avenue/Colton Avenue
8. King Street/Colton Avenue
9. Crafton Ave/Colton Ave

The intersection of Orange Street/Pioneer Avenue operates at unsatisfactory conditions under 2017, 2019, 2021, and 2023 conditions for without and with Project scenarios. The required improvement at this intersection is the installation of a traffic signal.

Three intersections operate at unsatisfactory conditions under 2035 for both without and with Project conditions:

1. SR-210 Eastbound Ramps/San Bernardino Avenue (p.m. peak hour);

2. SR-210 Westbound Ramps/San Bernardino Avenue (p.m. peak hour); and

5. Orange Street/Pioneer Avenue (a.m. and p.m. peak hours)

Improvements to the eastbound and westbound ramps are conditions of approval for the Redlands Crossings project, which is not yet under construction. Please note that these improvements are not on the ramps but are on San Bernardino Avenue.

The SR-210 Eastbound Ramps/San Bernardino Avenue improvements require restriping of the dedicated eastbound right turn lane to a shared eastbound through-right turn lane. Only nominal costs for restriping are required so no project fair share was estimated.

The SR-210 Westbound Ramps/San Bernardino Avenue improvements require restriping of the dedicated eastbound right turn lane to a shared eastbound through-right turn lane and the addition of a westbound through lane. The Project's fair share for the intersection improvement has been calculated based on Project traffic as a percentage of total growth from existing to year 2035 conditions. The Project's fair share contribution is $1,747 (0.9% of $192,270 required to construct required improvements). The Project will be required to pay its fair share for this improvement, as shown in improvement 23 in Section 5.16.4, below.

The only improvement for the intersection of Orange Street/Pioneer Avenue is the installation of a traffic signal. This improvement is included in the City of Redlands fee program. The Project's fair share for the intersection improvement has been calculated based on Project traffic as a percentage of total growth from existing to year 2035 conditions. In an ultimate General Plan build out horizon, growth in background traffic may exceed these volumes, reducing the percentage of contribution of the proposed

Project. The Project's fair share of this improvement is 5.4%. Based on this analysis, the Project does not create a direct significant impact at any study intersection. All intersections that operate at unsatisfactory conditions under "with Project conditions" also operate at unsatisfactory conditions under "without Project conditions".

Although the Project does not create a direct impact to the intersection of Orange Street/Pioneer Avenue, the Project will be required to pay its fair share for this improvement, as shown in improvement 24 in Section 5.16.6, below. The Project's fair share contribution is $13,503 (5.4% of $250,000 required to construct a new traffic signal).

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And the developer shall also be responsible for payment of fair share towards the following improvements located outside the City of Highland. The City of Highland shall collect the fair share payment amount and contribute such amount towards future construction of improvements by other public agencies.

14. Orange Street and SR-38 - construct a second westbound through lane. Construct improvements west of Orange Street to transition from two westbound lanes to one westbound lane. Construct a second northbound through lane. Construct improvements north of SR-38 to transition from two northbound lanes to one northbound lane. Construct a second westbound exclusive left-turn lane.
15. University Street/Central Avenue/I-10 Eastbound On-Ramp - construct a traffic signal. Construct an exclusive southbound left-turn lane and two exclusive northbound left-turn lanes. Construct freeway ramp improvements west of the intersection necessary to transition from two lanes to one lane.
16. University Street and I-10 Eastbound Off-Ramp - construct a traffic signal.
17. Bryant Street and SR-38 - construct a traffic signal. Construct an exclusive eastbound right-turn lane. The existing shared through/right lane will become a through lane.
18. Bryant Street and Oak Glen Road - construct an exclusive southbound right-turn lane and add a right-turn overlap phase. The existing shared through/right lane will become a through lane.
19. Sand Canyon Road, 14th Street, and Yucaipa Boulevard - convert northbound/southbound split phase to protected phase. Construct an exclusive northbound left-turn lane and restripe the northbound shared left/through lane to a through lane. Restripe the southbound shared left/through lane to a through lane. Construct an exclusive westbound right-turn lane and add a right-turn overlap phase. The existing shared through/right lane will become a through lane.
20. I-10 Eastbound Eureka Street Off-Ramp – construct a second off-ramp lane from the ramp diverge area.
21. I-10 Eastbound University Street Off-Ramp – construct a second off-ramp lane from the ramp diverge area.
22. I-10 Westbound Live Oak Canyon Road On-Ramp – construct a second on-ramp lane up to the ramp merge area.
23. SR-210 Westbound Ramps/San Bernardino Avenue – restriping of the dedicated eastbound right turn lane to a shared eastbound through-right turn lane and the addition of a westbound through lane.
24. Orange Street / Pioneer Avenue – construct a traffic signal.

Furthermore, the City of Highland will require the Project to pay development impact fees to mitigate Project-related traffic at locations within the City not analyzed specifically in the Project-specific Traffic Impact Analysis, but are analyzed in the City of Highland's development impact fee program. The amount of the development impact fee will be reduced based on the City's established development impact fee credit policy.

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Updates and Revisions to Section 7, Other CEQA Topics

Forestry Resources, development per the Harmony Specific Plan will result in a less than significant impact with regards to the conversion of Farmland due to the lack of existing agricultural uses and a LESA model score indicating the less than significant impacts

Because the Project development will contribute a less than significant impact to the conversion of Farmland to non-agricultural use, the Project's contribution to Farmland conversion is **not cumulatively considerable**.

7.1.5 Air Quality

Due to the defining geographic and meteorological characteristics of the Basin, the cumulative area for air quality impacts is the South Coast Air Basin (Basin) itself. As discussed in Section 5.3~~2~~.4 (Air Quality, Related Regulations, Criteria Air Pollutants), the portion of the Basin within which the City is located is designated as a non-attainment area for NO_2 under State standards, and for ozone, PM-10 and PM-2.5 under both state and federal standards.

As stated in Section 5.3 (Air Quality) of the DEIR, SCAQMD considers the thresholds for project-specific impacts and cumulative impacts to be the same. Therefore, projects that exceed project-specific significance thresholds are considered by SCAQMD to be cumulatively considerable. Based on SCAQMD's regulatory jurisdiction over regional air quality, it is reasonable to rely on its thresholds to determine whether there is a cumulative air quality impact. The SCAQMD mass daily significance thresholds for VOC and NO_X are exceeded during construction. Thus, the Project would have a cumulatively considerable increase in emissions due to construction-related VOC and NO_X. In terms of localized air quality impacts, construction of the Project would not have a cumulatively considerable impact due to criteria pollutant emissions. However, the construction emissions would exceed the federal 1-hour NO_2 standard. For the Project "with NC overlay" and "without NC overlay", operational emissions would exceed the SCAQMD's mass daily threshold for VOC, NO_X, CO, ~~and~~ PM-10, and PM-2.5 emissions. Thus, the Project would have a cumulatively considerable increase in emissions due to operational-related VOC, NO_X, CO, ~~and~~ PM-10, and PM-2.5 emissions.

Because the Project's emissions exceed applicable SCAQMD thresholds during construction and operation, the Project will result in **significant and unavoidable cumulative impacts**.

7.1.6 Biological Resources

An evaluation of whether an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that substantially diminish or result in the loss of an important biological resource, or those that would conflict with local, State, and/or Federal resource conservation plans, goals, or regulations. Impacts can be locally adverse but not significant because, although they would result in an adverse alteration of existing conditions, they would not substantially diminish or result in the permanent loss of an important resource on a population- or region-wide basis. Given the biological resources affected by the proposed Project, the geographic context for cumulative impacts is the Santa Ana River corridor. (RBF(a), pp.45-48) There is only one reasonably foreseeable cumulative project that is to be initiated by the City of Highland. This potential project is a bridge over Mill Creek at the southeast corner of the

Project site connecting to Highway 38, as shown in **Figure 5.4-11 – Potential Mill Creek Bridge Impacts to Wildlife Corridors**.

As noted in Section 5.4 – Biological Resources, the Project will not contribute to cumulative impacts to: the existing population of Santa Ana River Woollystar (SARWS), slender-horned spineflower, San Bernardino kangaroo rat (SBKR), Riversidean alluvial fan sage scrub (RAFSS) habitat, Coastal California Gnatcatcher (CAGN), southwestern willow flycatcher (SWWF), least Bell's vireo (LBVI), burrowing owl, or riparian habitat because these species and/or their habitat are not present on the Project site, the Project has been designed to avoid areas of suitable habitat, or where the Project would result in adverse impacts to sensitive species or habitat mitigation is incorporated to reduce impacts to less than significant levels. (RBF(a), pp. 45-48)

However, construction of a potential bridge across Mill Creek would impact intermediate RAFSS habitat and critical habitat for SBKR and Santa Ana sucker, as shown in **Figure 5.4-12 – Potential Mill Creek Bridge Impacts to Criteria Habitat and Jurisdictional Waters** and **Figure 5.4-13 – Potential Mill Creek Bridge Impacts to RAFSS**. The RAFSS habitat is known to support Santa Ana River woolly star and slender-horned spineflower. Loss or adverse modification of critical habitat will trigger the requirement for an Individual Take Permit (ITP) from both USFWS and CDFW. Preparation of a Streambed Alteration Agreement from CDFW and acquisition of an ITP as well as adherence to the potential design features listed below, under the discussion for wildlife corridors, may be considered during the City's planning process to reduce these impacts. Ultimately, it is up to the City's discretion to select the location for the proposed bridge, and it will be the City's responsibility to evaluate the environmental impacts associated with constructing the bridge in the selected location as part of a separate project, distinct from the Harmony Specific Plan project. This information on potential bridge locations and impacts is being provided in for informational purposes only. (RBF(e), pp. 2, 3)

Implementation of the Project will not adversely affect regional wildlife corridors in or adjacent to the site including Santa Ana River Corridor, Mill Creek Corridor, and the Morton Canyon Corridor. The Project will adversely affect the existing Crafton Hills Linkage corridor connecting the San Bernardino National Forest with the Crafton Hills; however, implementation of mitigation measure **MM BIO 6** will reduce impacts to this corridor to less than significant levels. Construction of a potential bridge across Mill Creek could impact jurisdictional waters and bisect the designated Mill Creek Regional Corridor. Adherence to the potential design features listed below and the development and acquisition of a Streambed Alteration Agreement, a Clean Water Act Section 404/401 permit and certification, and ITPs during the City's planning process may reduce these impacts, cumulative impacts from this potential City project will be reduced to less than significant. Ultimately, it is up to the City's discretion to select the location for the proposed bridge, and it will be the City's responsibility to evaluate the environmental impacts associated with constructing the bridge in the selected location as part of a separate project, distinct from the Harmony Specific Plan project. This information on potential bridge locations and impacts is being provided for informational purposes only (RBF(e), p. 3)Cumulative development within the Crafton Hills Area could result in potential impacts to the movement of wildlife along the Mill Creek corridor. However, Project impacts will be mitigated to less than significant. (RBF(a), p. 46)

Potential design features that may be considered by the City in its engineering design for a road from the Project site and a bridge over Mill Creek to Highway 38 may include:

- Locating the planned access road from the southeast corner of the Harmony Specific Plan site in the least environmentally sensitive location by following the alignment of an existing dirt road to avoid loss of additional habitat and to minimize any additional habitat fragmentation.
- Avoiding impacts to the federally and state listed species known to occur within the RAFSS habitat associated with Mill Creek.
- Conducting construction, maintenance and operation activities that involve clearing of vegetation outside of active breeding season (February 1 through August 31) or when cleared by a biologist prior to initiating ground disturbing activities.
- The planned road could be designed to consider wildlife movement requirements as outlined below:
- Fencing or lining the road with tall dense vegetation to discourage wildlife from crossing the access road.
- Providing sufficient clearance, both laterally and vertically to accommodate large wildlife (e.g., mountain lion and mule deer) to assure consistent movement within the Mill Creek Regional Wildlife Movement Corridor. A minimum height of 3 to 4 meters should be maintained for mountain lion and mule deer crossings.

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- Direct lighting on to the road along the access road and at the bridge.
- Maintaining the RAFSS habitat under the bridge in its natural state to mimic the surrounding natural area.
- Prohibiting trails under the bridge, since they can deter wildlife movement under the bridge.
- Placing pylons or other support structure for the bridge, to avoid or minimize effects on sediment transport.
- Adopting project specific construction BMP's should also address wildlife movement through the area during the construction phase for both the exit road and bridge.

For the reasons discussed above, **cumulative impacts to biological resources are less than significant with mitigation** due to the minimal amount of permanent loss of intact biological habitat or sensitive species that depend on these resources, permanent preservation of 535 acres of open space throughout the Project site, and incorporation of mitigation measures **MM BIO 1 through MM BIO 6**. (RBF(a), p.45-48) Regarding a potential bridge over Mill Creek, it will be the City's responsibility to evaluate the environmental impacts associated with constructing the bridge in the selected location as part of a separate project, distinct from the Harmony Specific Plan project.

7.1.7 Cultural Resources

Cultural resources impacts are site-specific with regard to any given resource. Cumulatively, then, impacts that may be considered cumulative simply relate to the loss of cultural resources in general over time throughout the region. As discussed in Section 5.5, Cultural Resources, with implementation of the mitigation measures recommended potential direct adverse impacts to historic and archaeological resources will be mitigated to below a level of significance. Direct impacts to the Bear Valley Highline Aqueduct and the Redlands Aqueduct will be less than significant through documentation of these resources as required by **MM CR 2 and MM CR 3**.

As with archaeological and historic resources, paleontological resources may be considered cumulative simply as they relate to the loss of resources in general over time throughout the region. No fossils have been found or recorded from the project site. However, the Project area consists of deposits that are known to have yielded fossil specimens. Therefore, the potential to find fossils within portions of the Project site is high. Impacts related to destroying unique paleontological resources or sites are significant. By implementing **MM CR 4** potential impacts to paleontological resources will be reduced to less than significant.

With adherence to and implementation of the City's Historic and Cultural Preservation Ordinances, General Plan policies 5.8.1, 5.8.2, and 5.8.3, mitigation measures **MM CR 1** through **MM CR 5**, as well as adherence to standard federal, state, and City regulations, impacts to historical resources, archaeological resources, and paleontological resources will **be less than significant**.

Table 7-C – Location in which DEIR Consistency with Regional Plans is Discussed

Plan	Location of Discussion
City of Highland General Plan	Environmental impact analysis section for each environmental issue under the heading "Related Regulations"
SCAG RTP/SCS	Section 6.0, Regional Consistency
CMP	Section 5.16, Transportation/Traffic
AQMP	Section 5.3, Air Quality, Related Regulations, Criteria Air Pollutants

7.6 References

The following references were used in the preparation of this section of the DEIR:

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RBF(b) — RBF Consulting, *Harmony Specific Plan, Sewer Analysis*, January 8, 2014. (Appendix I.4)

RBF(c) — RBF Consulting*, Harmony Specific Plan, Domestic Water System*, November 5, 2014. (Appendix I.2)

RBF(e) — RBF Consulting, *Mill Creek Bridge Analysis*, August 2014. (Appendix P.4)

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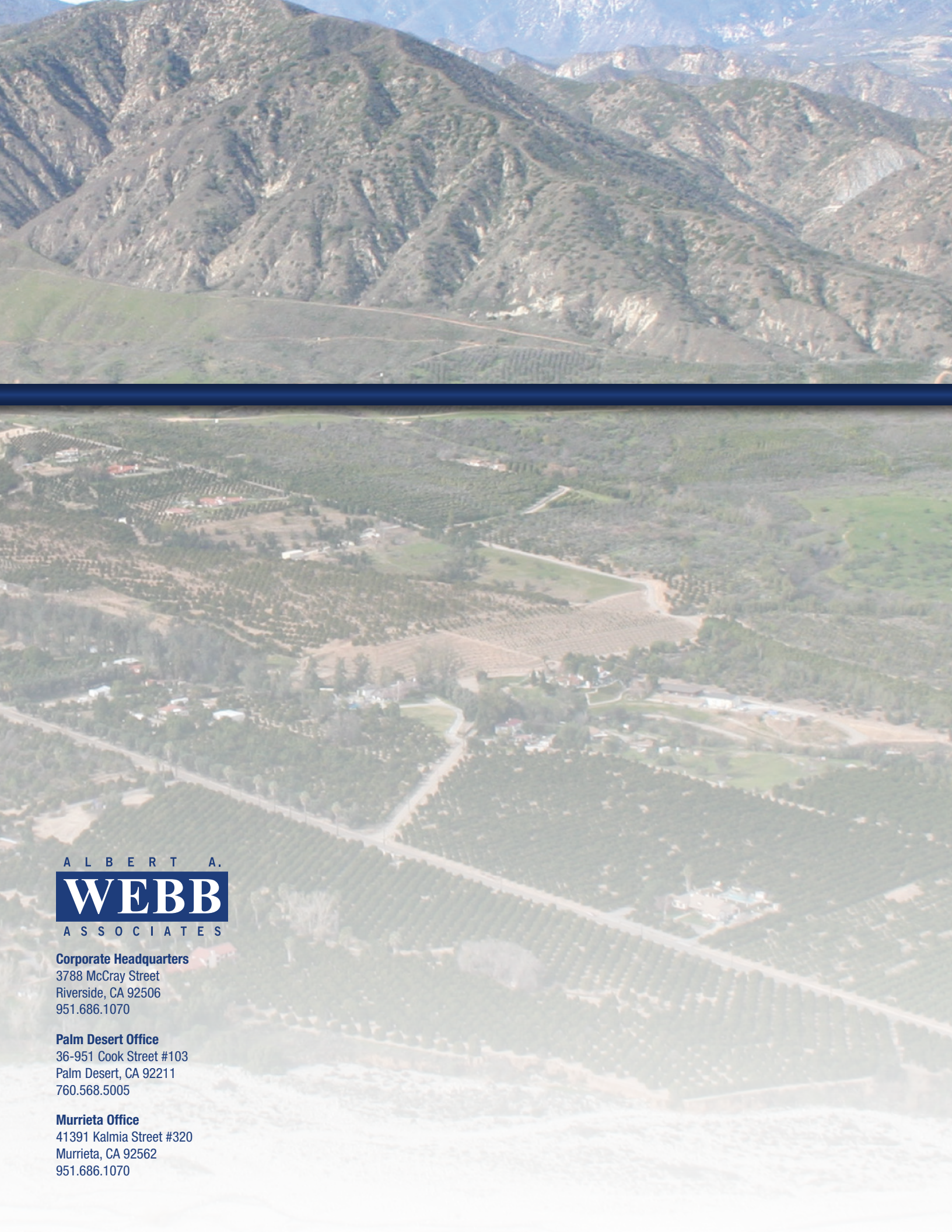

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