

4.13 CUMULATIVE EFFECTS

4.13.1 INTRODUCTION

This section describes the degree of cumulative effects that could occur as a result of implementing any of the alternatives identified in Chapter 2.0.

Guidelines prepared by the CEQ for implementing the National Environmental Policy Act (NEPA broadly define the cumulative effects. The term cumulative effects is generally used to describe the phenomenon of changes in the environment that result from numerous human-induced, small-scale alterations. This effect can result from the incremental consequences of an action when added to other past and reasonably foreseeable future actions (40 Code of Federal Regulation [CFR] 1508.7).

CEQ regulations state that the cumulative effect analysis should include anticipated environmental effects resulting from “the incremental effects of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over time” (40 CFR 1508.7).

Section 15130 of the CEQA *Guidelines* state “An Environmental Impact Report (EIR) shall discuss cumulative impacts of a project when the project’s incremental effect is cumulatively considerable, as defined in section 15065 (a)(3). Cumulatively considerable means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

Effects of the No Action Alternative, the Proposed Action/Projects, and the 2008 Land Management Plan presented in this Draft EIS/SEIR were assessed for cumulative effects with other past, present, and reasonably foreseeable future actions in the region, generally western Riverside and San Bernardino Counties.

This analysis considers the effects of these alternatives as evaluated in Section 4.0, Environmental Consequences, when combined with the effects of other past, present, and future actions in the affected region.

4.13.2 PAST, PRESENT, AND REASONABLY FORESEEABLE ACTIONS

The proposed authorization of incidental take and implementation of the HCP (Alternative B) or implementation of Alternative C may have an adverse cumulative effect on one or more elements of the environment when combined with other activities in the region. The Proposed Projects are associated with the upper Santa Ana River and its tributaries, Plunge Creek, Mill Creek, and City Creek. Key

elements of the environment in the Plan Area associated with the Santa Ana River and its tributaries are their drainage pattern and hydrology, the relatively natural, undeveloped floodplains, the vegetation, habitats and sensitive species associated with them, their aggregate sources, and source of recharge water for the underlying Bunker Hill basin. Other projects in the region that could affect these same key elements of the environment are evaluated in this cumulative analysis. Actions, such as issuance of a biological opinion or use permit, are those taken by a Federal agency such as USFWS, which are required for projects to move forward.

The past, present and reasonably foreseeable actions identified in this section are those in which USFWS would need to issue a biological opinion for one or more of the same listed species as in the Plan HCP. These include the Lytle Creek Ranch Specific Plan, the Harmony Specific Plan, the San Jacinto River Levee Stage 4 and River Corridor Expansion Project, and the Upper Santa Ana River Habitat Conservation Plan. As the Upper Santa Ana River Watershed Integrated Regional Water Management Plan includes local water supply projects with the objective of greater reliability and additional goals to balance flood management, increase stormwater recharge, improve water quality, and improve habitat and open space and overlaps geographically with the Plan Area, this plan is included as reasonably foreseeable projects by various water providers, flood control districts/departments, and the Conservation District that would affect surface and groundwater. These actions/projects are described in more detail below.

4.13.2.1 Calmat Mining and Industrial Development

The USFWS issued a biological opinion to the Corps of Engineers (USACE) in 1995 and an amendment in 1998 for the impacts of Calmat, now Vulcan Materials, mining operations and planned industrial development in the Cajon Wash Area. The original opinion addressed 24 sensitive species including a number of the Covered and special status species addressed in the HCP, including woolly-star, spineflower (potential habitat), gnatcatcher (potential) and San Bernardino kangaroo rat (SBKR). The proposed project included approximately 575 acres of permanent impacts to Riversidian Alluvial Fan Sage Scrub (RAFSS) outside of the 100-year floodplain resulting from mining and industrial development and 64.9 acres of mining below the 100-year floodplain. The biological opinion also addressed 165 acres of previous mining impacts dating from 1984 that had not previously been addressed. To mitigate for the previous impacts and the proposed impacts a total of 768 acres of RAFSS habitat was conserved through a conservation easement and managed in perpetuity.

Lytle Creek North

Lytle Creek North is a 677-acre master planned community in unincorporated San Bernardino County on the north bank of Lytle Creek (a tributary of the Santa Ana River) just south of the I-15 freeway. It is approximately 13 miles northwest of the Plan Area. The Final Environmental Impact Report for the project was completed in October 2001, and the USFWS issued a biological opinion on November 4, 2003. The project consists of approximately 2,400 residential units on 400 plus acres, 45 acres of commercial development, 66 acres of open space, 20 acres of public facilities, 33 acres of roadways and 59 acres of community parks. It also includes a 213-acre offsite conservation area managed in perpetuity

for the benefit of SBKR. Development of the site has been occurring in phases and it is still not complete, however, the entire site has been graded. The majority of the project site had experienced various levels of disturbance prior to its development, however, portions of it contained RAFSS and Riversidian Upland Sage Scrub (RSS) and were occupied by SBKR. The entire 677-acre development site was designated critical habitat for SBKR and gnatcatcher¹. The 213-acre conservation area was mitigation for impacts to both species and their critical habitat. Portions of the development site were suitable habitat for other Special Status Species found in the Plan Area including Los Angeles Pocket mouse, Plummer's mariposa lily and Parry's spineflower.

Lytle Creek Ranch Specific Plan

The project area includes a 2,397.7-acre main project site and another 28.8 acres of associated offsite improvements. The proposed project consists of residential, commercial, and industrial development; the construction of approximately 7 miles of revetment in the active stream channel of Lytle Creek to protect the development; and the construction of roads and utilities to support the project.

The project area supports the federally endangered woolly-star, least Bell's vireo, and SBKR, and its critical habitat. Although not found in recent surveys, there are occurrence records for the federally endangered spineflower and federally threatened gnatcatcher. A California Species of Concern (CSC), the Los Angeles pocket mouse is also present. There are also records for two sensitive plant species, Plummer's mariposa lily and Parry's spineflower. The Specific Plan area supports the following sensitive plant communities and/or associations: RAFSS; RSS; southern willow scrub; California sycamore alliance; and southern cottonwood willow riparian.

The proposed project would result in fill of waters of the United States totaling approximately 45.50 acres. Temporary fill of another 15.76 acres. The project would result in a total of 1,327.9 acres of permanent impacts and 50 acres of temporary impacts. Of these, there would be 1,190.9 acres of permanent impacts to SBKR critical habitat and 18.7 acres of temporary impacts.

In October on 2017 an Addendum to the Lytle Creek Ranch Specific Plan included modifications to the tract map which did not increase the number of residential units or square footage of non-residential and is consistent with the scope and type of development analyzed in the original EIR. Proposed changes included replacement of a proposed golf course with open space, removal of age restrictions on residential units, and changes to the distribution of units. The USFWS is currently preparing a biological opinion to address the proposed project's effects on federally listed species and their critical habitat.14.13.2.4 Cemex Levee Repair.

There is an in-stream inactive mining pit located between two of the proposed neighborhoods in the Lytle Creek Ranch development. During a high flow event in January 2005, the levee protecting the pit was breached. Cemex is proposing to replace the 25-year facility that was breached with a 100-year

¹ The area was designated critical habitat for CAGN at the time of issuance of the biological opinion. This critical habitat unit was removed from subsequent revisions of the critical habitat rule for CAGN.

facility and to integrate it into the proposed levee for Lytle Creek Ranch. This project would impact a small number of SBKR and their critical habitat.

Upper Santa Ana River Habitat Conservation Plan

Water agencies and the SBCFCD and other stakeholders have begun the process of developing an Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP). The purpose of the Upper SAR HCP is to enable the water resource agencies to continue to provide and maintain a secure source of water for residents and businesses in the watershed and specify how species and their habitats will be protected and managed in the future and will provide the incidental take permits needed to maintain, operate, and improve water resource infrastructure.

The Study Area of the Upper SAR HCP generally includes the watershed boundary of the tributaries areas for the Upper Santa Ana River from the headwaters in the San Bernardino Mountains down to Prado Dam. The area covered by the HCP is anticipated to be the Upper Santa Ana River Wash down to the Riverside Narrows. The Plan Area is located within the mid-western area of the Upper SAR HCP Study Area.

The Upper SAR HCP draft list of Covered Species includes all of the Covered Species in the HCP and many of the same special status species as well as some additional ones.

Although the total extent of the Covered Activities and the mitigation to offset the effects of those activities have not been determined yet, in order for the HCP to be permitted, impacts to federally listed species have to be mitigated to the maximum extent practicable. To achieve this standard, it is anticipated that impacts to these species will be substantially offset by the mitigation measures. It is anticipated that a number of the non-listed species will be conserved under the umbrella of the conservation measures for listed species, and that additional conservation will be provided for those whose life history requirements are different than for listed species.

4.13.2.2 Upper Santa Ana River Watershed Integrated Regional Water Management Plan

The Upper Santa Ana River Watershed (USARW) Integrated Regional Water Management Plan (IRWMP) is located within the Santa Ana River Watershed, the largest stream system in Southern California. The plan covers 852 square miles of the SAR watershed, primarily located in San Bernardino and Riverside Counties. The IRWMP plan area includes Big Bear in the northeast, Beaumont in the southeast, Riverside in the southwest, and the Cajon Pass and Devore in the northwest.

The primary purpose of the IRWMP is to encourage integrated planning among the agencies in the IRWMP Region and in particular to improve water supply reliability by implementing local supply projects as imported water is increasingly viewed as a less reliable supply. Additional goals of the IRWMP are to: balance flood management and increase storm water recharge, improve water quality, and to improve habitat and open space. The 2015 USARW IRWMP has been finalized and is under

review by the agencies. The Plan Area is generally located within the center of the IRWMP area. The IRWMP would not affect any mining operations.

4.13.2.3 City of Highland Development Projects

Harmony Specific Plan

The Harmony Specific Plan (Specific Plan) is located within the eastern portion of the City of Highland at the foothills of the San Bernardino National Forest approximately 6 miles east of the 210 freeway, 4.5 miles north of the 10 freeway, and north of SR 38. It is directly adjacent to and east of the Plan Area, separated by Greenspot Road. The proposed project includes approximately 1,650 acres of development for residential neighborhoods, parks, recreation areas, neighborhood gathering places, commercial services, and community facilities. Portions of the site were previously mined to provide fill material for the Seven Oaks Dam.

The Specific Plan was approved and the EIR certified by Highland City Council on August 11, 2016. Construction of the project is currently on hold pending the outcome of legal challenges. Buildout is expected to occur in phases and will be dependent on economic conditions and decisions of the landowners or developers. A number of sensitive species occur within the Specific Plan boundaries including at least four federally listed species, SBKR, southwestern willow flycatcher least Bell's vireo, and woolly-star. Woolly-star is also state listed. The federally threatened CAGN may also be present². There are also sensitive plant communities including RAFSS, RSS, southern cottonwood willow riparian forest, and southern willow scrub/ mulefat scrub. SBKR critical habitat occurs on the south and west sides of the Specific Plan area. The proposed project would permanently impact approximately 221 acres of it. Critical habitat for the Santa Ana sucker is located in Mill Creek and the Santa Ana River to the southeast, south and west of the site, however Santa Ana sucker are not present because of the absence of year-round water. The area was designated as critical habitat for Santa Ana River sucker because the Santa Ana River and Mill Creek provide stream and storm waters required to transport coarse sediments that are necessary to maintain their preferred substrate. The upland areas of the Specific Plan, while not designated as critical habitat, provide a source of coarse sediments for transport downstream. Blue line streams which cross the site also provide a means of transport of the coarse sediment. The Draft EIR concluded that impacts related to hydrology to be less than significant with the implementation of mitigation measures. However, the USFWS expressed concern that the development and its impacts to hydrology could result in a loss of coarse sediment in Mill Creek and the Santa Ana River, affecting Santa Ana Sucker downstream.³

Other Highland Projects

In addition to the proposed Harmony development, there are a number of other small to medium size development projects proposed within Highland on the north side of the Plan Area on either side of

² Surveys did not detect gnatcatcher, however, CAGN occur directly adjacent to the project and there may have been a misidentification of an individual CAGN as a black-tailed gnatcatcher (USFWS).

³ Comment letter on DEIR by Palm Springs Fish and Wildlife Office

Greenspot Road. They are summarized in Table 4.13-1. Each of these projects has the potential to impact one or more of the Covered Species and other Special Status Species found in the Plan Area. For example five of the proposed projects have occurrence records for SBKR on or adjacent to the site and seven of them are located in SBKR critical habitat. Those projects which are contiguous to the Plan Area, south of Greenspot Road, have the greatest potential for impacts. Each of the projects has the potential to impact one or more of the Special Status Species not covered under the HCP. Table 4.13-1 indicates the project approximate acreage and its potential impacts to Covered Species in the HCP.

Table 4.13-1 City of Highland Development Projects

Project	Description	Acres	Covered Species Impacts
Tobin/Greenspot Connector	Proposed commercial development south of Greenspot Road between the 210 Freeway and Boulder Avenue	2	SBKR critical habitat, possibly SBKR
Greenspot Village	Proposed retail and up to 800 residential units located north of Greenspot Road between the 210 freeway and Boulder Avenue	76	SBKR critical habitat, possibly SBKR, woolly-star
TREH Partners/SBCFCD	Commercial and residential	16	SBKR critical habitat, SBKR, possibly woolly-star
Goodman and Jerristma	Commercial and residential	11	SBKR critical habitat, possibly SBKR
Wood Bridge	130 residential units	22	SBKR and its critical habitat
East Highlands Ranch	319 residential units	29	SBKR and its critical habitat, possibly woolly-star, spineflower
Development 1 Group	200 residential units	60	SBKR critical habitat, SBKR, possibly woolly-star, spineflower
Housing Project	32 residential units	22	Possibly SBKR, woolly-star, spineflower
Mediterra Residential	197 residential units	181	Possibly SBKR, woolly-star in area south of Greenspot
Walmart Vacant Property	Commercial	20	SBKR critical habitat, possibly SBKR
		Total: 439	

4.13.2.4 City of Redlands Development Projects

There are several development projects within the City of Redlands that have had or have the potential to have impacts to SBKR.

Redlands Sports Park

The Redlands Sports Park project consisted of the construction of active sports fields and other athletic facilities, parking areas and a combination playing field and flood control basin on a 98-acre property adjacent to the Redlands Municipal Airport just south of the Plan Area. 40-acres of the site was dedicated to onsite conservation, with the ultimate goal of transferring the conservation off-site. SBKR were captured in suitable habitat in the development area and relocated to the conservation area.

Diversified Pacific

The Diversified Pacific project consists of 81 residential units, on 30.4 acres which are currently under construction. The project is located north of the intersection of E. San Bernardino Avenue and Judson Street, approximately 0.3 miles south of the Plan Area. The site was largely surrounded by development and having only a tenuous connection to the Plan Area through a narrow undeveloped parcel west of the Redlands Airport. Approximately 14.1 acres of the site were determined to be occupied by SBKR. The project was mitigated by providing long-term funding for the management in perpetuity of 28.2 acres of the Redlands Conservancy Conservation Area. In addition, all SBKR trapped within the 14.1-acre area were relocated to the Cajon Creek Conservation Bank in the Cajon Wash. SBKR have been documented on the site in monitoring events since their release (from 2015 to 2017).

East Branch Extension

This was a water pipeline project which included areas of Redlands and Highland, including the Plan Area and the unincorporated community of Mentone. The 6-mile pipeline connects the SBVMWD's Foothill Pipeline near the intersection of Cone Camp and Greenspot road in the City of Highland with the existing Crafton Hills Pump Station located near Mill Creek Road in the community of Mentone. It affected approximately 180 acres and was completed over a period of about two years. A biological opinion was issued by the USFWS to address effects on SBKR and its critical habitat, woolly-star and gnatcatcher. A number of conservation measures were implemented to minimize impacts and restore the site to useable habitat once the pipe was in place including limits of work, recontouring of the site, placement of suitable uncompacted substrate on the top layer of the pipe trench backfill, weed control. A 32.7 acres conservation area was also established for the benefit of SBKR and gnatcatcher.

San Jacinto River Area

In addition to the projects described below, a number of past projects have significantly affected the hydrogeomorphic processes in the San Jacinto River which are important to the maintenance of SBKR habitat. The past projects include the Bautista Canyon Flood Control Basin, the channelization of Bautista Creek, the Grant Avenue Recharge Basins which capture live storm runoff and a sand mine which captures sediment.

Hemet-San Jacinto Groundwater Recharge Project

The Hemet-San Jacinto Groundwater Recharge project included the construction and operation of a series of recharge basins and associated infrastructure in the San Jacinto River. The project footprint is 35-acres. The habitat within the 35-acre area was heavily occupied by SBKR. Prior to construction, the site was trapped and the captured animals were translocated to a nearby location, however it was estimated that there would be up to 50 percent mortality. The site will largely remain unavailable to SBKR during the life of USACE permit, but it could be restored in the future, assuming the permit is not renewed. Water provided for the ground water recharge is not diverted from the River, it is imported, however, the presence of the 35-acre recharge basins in the floodplain of the river limits river flow

patterns during small to moderate flood events, affecting normal ecological processes which maintain the downstream habitat for SBKR and other species, The recharge basins are expected to erode and collapse during larger than 10-year flood events, thereby rejuvenating downstream habitat.

San Jacinto River Levee Stage 4 and River Corridor Expansion Project

The San Jacinto River Levee Stage 4 and River Corridor Expansion Project is located within central Riverside County in the northern portion of the City of San Jacinto and in unincorporated Riverside County. The City of San Jacinto prepared an EIR for the project which was certified by City Council in June 2015. The project involves the construction and subsequent maintenance of a new levee, approximately five miles long and other improvements such as expanding the existing bridge openings of Sanderson Avenue and State Street. The project will widen the existing San Jacinto River channel, expanding the corridor by approximately 374 acres. The San Jacinto River Levee Stage 4 and River Corridor Expansion Project is located approximately 20 miles southeast of the Wash Plan Area.

The project area supports the following sensitive species: least Bell's vireo, Los Angeles pocket mouse. SBKR has historically been documented in the project area in trace numbers and currently exists upstream of the project area however, no SBKR were found in the most recent intensive trapping effort in 2012. The project area supports sensitive riparian vegetation including: southern willow scrub, mulefat scrub, and mature cottonwood/willow riparian forest. The project is located within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) and the project was found to be consistent with all of the applicable requirements of the MSHCP. The mitigation for impacts to riparian/riverine areas and habitat for least Bell's vireo and Los Angeles pocket mouse was found to be superior preservation as compared to the existing condition.

The project is located along the San Jacinto River. The San Jacinto watershed is a 728-square mile drainage area from the San Jacinto Mountains southwest to Canyon Lake and Lake Elsinore. Due to the design, impacts associated with hydrology and drainages for the project are anticipated to be less than significant with no mitigation measures needed. The project area does not include any mining operations and implementation of the project would not affect mining.

Etiwanda Fan

A number of flood control projects and urban development have occurred on the Etiwanda Fan west of Lytle Creek. These projects have resulted in substantial reduction and fragmentation of RAFSS and RSS habitat and the species associated with it, including some of the HCP Covered Species, i.e., gnatcatcher and SBKR, and many of the special status species found in the Plan Area. SBKR and gnatcatcher have not been detected on the Etiwanda fan for some time and it is believed that they may be extirpated from the area.⁴

⁴ USFWS, Palm Springs Fish and Wildlife Office

4.13.2.5 Unincorporated San Bernardino County

At the time of this writing there are no proposed major development projects within the County of San Bernardino southeast of the Plan Area.

4.13.3 CUMULATIVE EFFECTS BY RESOURCE

4.13.3.1 Air Quality

The Plan Area is located in the non-desert portion of the South Coast Air Basin (Basin), a geographic area that includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The Basin encompasses the coastal plain and connects broad inland valleys and low hills. The geographic context for the cumulative impact analysis of air quality is the Basin.

Greenhouse gases (GHG) are those gases that will contribute to global climate change; therefore, the cumulative impact area for GHG emissions is the earth's atmosphere.

The list of past, present, and reasonably foreseeable projects considered in this analysis of cumulative impacts are those that are anticipated to result in construction and/or operational emissions that would exceed South Coast Air Quality Management District (SCAQMD) thresholds for NO_x, PM₁₀ and/or PM_{2.5} or substantial direct or indirect greenhouse gas emissions:

City of Highland Development Projects: Harmony Specific Plan; Tobin/Greenspot Connector; Greenspot Village; TREH Partners/ SBCFCD; Goodman and Jerristma; Wood Bridge; East Highlands Ranch; Development 1 Group; Housing Project; and Mediterra Residential;

City of Redlands Development Projects: Redlands Sports Park; Diversified Pacific; East Branch Extension.

Alternative A: No Action Alternative

The existing on-site and off-site emissions from ongoing aggregate mining operations exceed SCAQMD Operations thresholds for NO_x, PM₁₀ and PM_{2.5}. Because the No Action Alternative's emissions exceed applicable SCAQMD thresholds during existing aggregate mining operations the No Action Alternative would continue to result in significant and unavoidable cumulative impacts on air quality.

Alternative B: Proposed Action/Projects

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 emissions of NO_x, PM₁₀, and PM_{2.5} from expanded mining operations are expected to exceed the SCAQMD thresholds and are expected to exceed State Ambient Air Quality Standards (AAQS). Therefore, the Proposed Action/Projects would have a cumulatively considerable increase in operational emissions NO_x, PM₁₀, and PM_{2.5}. Because the Proposed Action/Projects emissions exceed applicable SCAQMD

thresholds during operation the Proposed Action/Projects would result in significant and unavoidable cumulative impacts on air quality.

The primary GHG generated by the Proposed Action/Projects would be carbon dioxide in the form of vehicle exhaust and equipment exhaust. At buildout in 2030, total unmitigated carbon dioxide equivalents for carbon dioxide, methane, and nitrous oxide (vehicle and equipment exhaust from expanded mining operations) would be 21,000 MT CO₂ Eq. Due to implementation of existing regulations emissions from the fleet of haul trucks and processing equipment used for expanded aggregate mining are anticipated to be less than this estimate which was included in the 2008 EIR. However, this estimate is still considered a substantial amount of GHG emissions annually based upon CEQA guidelines. A project's GHG emissions and the resulting significance of potential impacts are most properly assessed on a cumulative basis. Therefore, the Proposed Action/Project's contribution to GHG emissions would be cumulatively considerable and unavoidable based upon CEQA guidelines.

The Proposed Action/Projects would result in significant and unavoidable cumulative impacts on air quality and GHG emissions based upon CEQA guidelines and a Statement of Overriding Considerations would be required under CEQA.

Alternative C: 2008 Land Management Plan

As outlined above for Alternative B in Section 4.1.1.3, the *Traffic Study* analyzed expanded mining as proposed in the 2008 Land Management Plan (Alternative C) which included 32 more acres of expanded mining than Alternative B (Proposed Action/Projects). Although the traffic impacts may be slightly overestimated for Alternative B, they represent anticipated impacts from expanded mining of Alternative C. Modeled air quality levels were based upon vehicle data and project trip generation included in the *Traffic Study*. Consequently, modeled air quality impacts may be slightly overestimated for Alternative B, they represent anticipated impacts from expanded mining of Alternative C. Therefore, potential impacts from implementation of Alternative C would be consistent with the analysis and conclusions outlined above for Alternative B.

Alternative C would result in significant and unavoidable cumulative impacts on air quality and GHG emissions based upon CEQA guidelines and a Statement of Overriding Considerations would be required under CEQA.

4.13.3.2 Geology and Mineral Resources

The geographic context for the cumulative impact analysis of geologic hazards is the Plan Area and surrounding areas. The geographic context for cumulative impact analysis of mineral resources is western Riverside and San Bernardino which includes deposits from along the Santa Ana River and Lytle Creek tributary. The list of past, present, and reasonably foreseeable projects considered in this analysis of cumulative impacts are existing aggregate mining operations in the region and include: Cemex – Lytle Creek; CalPortland – Colton/ San Bernardino; Robertson's – Cabazon; Robertson's – Banning; Robertson's – Rialto; and FST Sand & Gravel – Corona/ Riverside County.

Alternative A: No Action Alternative

Under Alternative A no construction for new Projects would occur, so there would be no cumulative impacts related to geologic hazards. Under Alternative A no expanded aggregate mining would occur and existing permitted Cemex and Robertson's mining would be mined to completion, but no additional mining permitting is presumed. The impacts from the No Action Alternative on the availability of mineral aggregate is not cumulatively considerable.

Alternative B: Proposed Action/Projects

The Proposed Projects (Covered Activities) include construction of infrastructure including, roadways, wells and water pipelines, and storm drains that are susceptible to damage from strong ground shaking or unstable soils (landslides, lateral spreading, subsidence, liquefaction, or collapse). The California Green Building Standards Code (CGBSC); Part 11 of Title 24, California Code of Regulations) provides standards that must be met to safeguard life, health, property, and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all buildings and structures, and have been specifically tailored for California earthquake conditions. All Proposed Project infrastructure (Covered Activities) would be required to be designed and constructed in accordance with the latest applicable seismic safety guidelines, including the standard requirements of the CGBSC. With compliance with the CGBSC, potential impacts on infrastructure from strong ground shaking or unstable soils that would result in loss, injury or death is reduced to less than significant levels.

The Proposed Action/Projects would result in topography changes caused by new or expanded mining operations. With the increase of mining activities, there would be new cut slopes. However, final inclination would not occur steeper than a 2:1-foot height variance ratio. When mining activities are terminated in a mining pit then reclamation and re-vegetation is then carried out. Impacts related to on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse within the mining areas is considered less than significant.

Aside from the mining pits, the Plan Area does not have large variations in topography and the risk of impacts from unstable soil is considered less than significant. Construction, operation and maintenance of water conservation facilities, wells and water infrastructure, expansion of roadways, and flood control facilities would be required to adhere to the design and engineering standards and would reduce potential damage from liquefaction, to less than significant levels.

The Proposed Action/Projects would lead to an additional 401.5 acres of aggregate mining activities to occur and an increase in aggregate materials produced from the Plan Area. Therefore, there would be no loss of valuable statewide or regional mineral resources, but an increase in availability.

The effects from Alternative B are not expected to result in seismic events, landslides, or other geologic hazards, or loss of availability of valuable mineral resources and therefore, are not cumulatively considerable.

Alternative C: 2008 Land Management Plan

As with Alternative B, all future infrastructure projects would be required to be designed and constructed in accordance with the latest applicable seismic safety guidelines, including the standard requirements of the CGBSC. With compliance with the CGBSC, potential impacts on future infrastructure from strong ground shaking or unstable soils that would result in loss, injury or death is reduced to less than significant levels. Impacts related to on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse within the mining areas or as a result of mining are considered less than significant.

Alternative C would lead to an additional 433.5 acres of aggregate mining activities to occur and an increase in aggregate materials produced from the Plan Area.

The effects from Alternative B are not expected to result in seismic events, landslides, or other geologic hazards, or loss of availability of valuable mineral resources and therefore, are not cumulatively considerable.

4.13.3.3 Hydrology and Water Quality***Alternative A: No Action Alternative***

Under Alternative A no construction for new Projects would occur. Existing mining operations would continue and existing operation and maintenance of water conservation facilities would also continue. Therefore, there would not be an increase in the potential to adversely affect water quality from construction and maintenance activities within the Plan Area. There would not be an increase in pumping from the groundwater for expanded aggregate processing or for water supply. There would be not be an increase in Projects that could modify the existing drainage pattern or impede or redirect flood flows in a 100-year floodplain. There would be no cumulative impacts related to water quality or hydrology.

Alternative B: Proposed Action/Projects

Although mining activities have the potential to affect surface and groundwater quality in the Wash Plan Area by increasing sediment and other pollutants in stormwater runoff there are multiple regulations that require mining operations to implement best management practices (BMPs) to protect water quality, including the Clean Water Act Section 402 National Pollutant Discharge Elimination System (NPDES) program and the Surface Mining and Reclamation Act (SMARA). With implementation of BMPs outlined in the Stormwater Pollution Prevention Plan (SWPPPs) prepared for compliance with the General Construction Activity and Industrial Stormwater permits, as well as the Mining and Reclamation Plans, the expanded mining operations would not be expected to substantially degrade water quality and the potential to violate water quality standards of water bodies in or downstream of the Plan Area or violate waste discharge requirements would be significantly reduced. The other covered activities including water conservation, water infrastructure, flood control, transportation, trails, and agriculture

would not result in substantial exposure sediments or other pollutants to stormwater runoff, such that water quality standards would be violated or water quality to be degraded.

The closest of the past, present and reasonably foreseeable actions that are located in the same watershed (Santa Ana River Watershed) as the Wash Plan include the Harmony Specific Plan the Upper Santa Ana River Habitat Conservation Plan, the Upper Santa Ana River Watershed Integrated Regional Water Management Plan and the Lytle Creek Ranch Specific Plan. Lytle Creek is tributary to the Santa Ana River but its confluence is further downstream, in the City of San Bernardino. The San Jacinto River Levee Stage 4 and River Corridor Expansion Project is located within the San Jacinto River Watershed which ultimately is tributary to the Santa Ana River, but further downstream near Prado Dam via Lake Elsinore and Temescal Creek.

In larger storm events stormwater runoff from the Harmony and Lytle Creek Specific Plan developments would ultimately be discharged to the Santa Ana River. Construction of these developments would be required to comply with the General Construction Activity permit which requires preparation of a SWPPP and implementation of BMPs that will minimize discharge of sediments offsite and other pollutants associated with construction. These developments will also be required to prepare a Water Quality Management Plan (WQMP) that outlines the post-development site design/Low Impact Development (LID) and treatment control BMPs to reduce the discharge of pollutants to receiving waters. With implementation of BMPs outlined in the SWPPPs and WQMPs for these developments, discharge would not violate water quality standards of water bodies in or downstream of the Wash Plan Area or violate waste discharge requirements or substantially degrade water quality.

The Upper Santa Ana River Watershed Integrated Regional Water Management Plan includes local water supply projects with the objective of greater reliability and additional goals to balance flood management, increase stormwater recharge, improve water quality, and improve habitat and open space. Some of these projects will occur in the Wash Plan Area. The Upper Santa Ana River Habitat Conservation Plan covered activities would include projects that would enable the water resource agencies to continue to provide and maintain a secure source of water for residents and businesses in the watershed. Some of these projects will also occur in the Wash Plan Area. Construction of these projects will be required to comply with the General Construction Activity permit and therefore would not likely adversely affect surface water. These projects would have a beneficial effect on groundwater as they are designed to help manage the local groundwater supplies.

With compliance with state and federal regulations, including the General Construction Activity Permit and Water Quality Management Plans, the Proposed Action's/Project's contribution to cumulative hydrology and water quality impacts are less than significant.

Alternative C: 2008 Land Management Plan

As with Alternative B, proposed projects under Alternative C would also be required to comply with the same State and Federal regulations. With compliance with State and Federal regulations, including the General Construction Activity Permit and Water Quality Management Plans, the 2008 Land

Management Plan's contribution to cumulative hydrology and water quality impacts are less than significant.

4.13.3.4 Biological Resources

Alternative A: No Action Alternative

In the No Action Alternative, the USFWS permit for incidental take of Covered Species would not be issued. Current mining and water conservation would continue.

Individual projects would have limited or no ability to mitigate cumulative effects on the resources because the HCP conservation strategy would not be in place to coordinate mitigation and conservation throughout the Plan Area. Accordingly, the cumulative impacts on biological resources would remain significant.

Of the affected plant communities, the community of most importance to Covered and special status species in the Plan Area are the various seral stages of RAFSS. Within these categories pioneer and intermediate RAFSS with low shrub density are the most frequently utilized by SBKR. Intermediate RAFSS provides wintering and nesting habitat for gnatcatcher. RAFSS with cactus patches and/or yucca (potential nest sites) is the most beneficial to cactus wren. Woolly-star and slender-horned spineflower can be expected to be found in open areas between shrubs within the associated RAFSS habitats. Woolly-star is more likely to be associated with earlier seral stages of RAFSS because it establishes in areas opened up by fluvial process. Spineflower is more likely to be found in older flood terrace areas where active flood scouring rarely occurs but where there is sheet flow of water in major storm events.

The development projects located outside of the Plan Area, including the Lytle Creek Ranch Specific Plan, the Harmony Specific Plan, and various development projects in the City of Highland (specifically along the northern boundary of the Plan Area), would result in loss of RAFSS habitat that supports sensitive species. The cumulative affects to sensitive species and loss of RAFSS habitat under the No Action Alternative is significant and unavoidable.

Alternative B: Proposed Action/Projects

The Santa Ana River Wash's biodiversity has diminished as urban growth has caused the river to become more constrained and its habitat to become more fragmented. Tributaries of the River have been isolated from each and the have been forming isolated blocks of land and causing endangered species conflicts.

The federally listed endangered SBKR, and threatened gnatcatcher are known to occur within the Plan Area. The USFWS has designated portions of the Plan Area as critical habitat for SBKR. There is an urgent need to preserve remaining biodiversity without halting urban development, aggregate mining, water conservation and other uses. Implementation of Alternative B would reconfigure the ownership of lands that are best suited for preserving unique habitat for plants and wildlife with those that are more appropriate for mining.

It is estimated that there will be 495.1 acres of permanent impacts and 80.0 acres of temporary impacts to RAFSS from Covered Activities under Alternative B, and that 1,529.8 acres will be managed and conserved in the HCP Preserve. The majority of permanently impacted areas are associated with new or resumed aggregate mining activities and will occur in areas contiguous with existing mining operations, which leaves the vegetation communities and Covered Species habitat largely intact with a high level of connectivity within and among habitat types.

With implementation of the HCP conservation measures impacts to SBKR and its critical habitat, gnatcatcher, cactus wren, spineflower, and woolly-star are fully compensated and impacts are reduced to less than significant levels. Additional mitigation is not required. Covered Activities will result in approximately 553.2 acres of permanent impacts to plant communities, portions of which could be occupied by special status plant species or live in or foraging habitat for various special status reptile, amphibian, small mammal, and bird species. These impacts will be mitigated for by the conservation and management of 1,569.1 acres of habitat containing the same communities.

Considering the limits on take set by the HCP, the regional scale of the conservation strategy designed to address cumulative impacts on covered species and natural communities, the long term management and monitoring of conservation lands and the HCP conservation strategy's contribution to species recovery, Alternative B would not result in cumulatively considerable contribution to cumulative effects on the affected biological resources. Alternative B provides a robust conservation plan for SBKR which is anticipated to mitigate the direct and indirect effects of Alternative B to less than significant.

Alternative C: 2008 Land Management Plan

If adopted, Alternative C would conserve approximately 312 fewer acres of habitat (much of it RAFSS) than would be conserved by implementation of the 2019 HCP under Alternative B, and it would result in approximately 88 more acres of permanent impacts than Alternative B. In addition, Alternative C provides few specifics on how RAFSS and other habitat would be maintained. By contrast Alternative B includes a robust, permanently funded habitat monitoring and management plan. Implementation of the Alternative C would not provide adequate conservation to address the cumulative impacts to RAFSS from implementation of the plan. Therefore, implementation of Alternative C would contribute adverse impacts to covered and other special status species and their habitats, including RAFSS, that are cumulatively considerable and significant.

4.13.3.5 Land Use

Alternative A: No Action Alternative

The No Action Alternative would not result in incompatible or conflicting land uses/projects with existing land use plans including the General Plans of the Cities of Redlands and Highland and San Bernardino County. Impacts related to land use from the No Action Alternative are less than significant. There would be no cumulative impacts related to land use.

Alternative B: Proposed Action/Projects

The Proposed Action/Projects would not result in adverse impacts associated with land use. Rather, the Proposed Action/Projects would result in beneficial impacts associated with land use in the Plan Area as compared to the existing condition. There would be no cumulative impacts related to land use from Alternative B.

Alternative C: 2008 Land Management Plan

The 2008 Land Management Plan would not result in adverse impacts associated with land use. Rather, the 2008 Land Management Plan would result in beneficial impacts associated with land use in the Plan Area as compared to the existing condition and there would be no cumulative impacts related to land use from Alternative C.

4.13.3.6 Socioeconomics, Population and Housing, and Environmental Justice***Alternative A: No Action Alternative***

Under Alternative A, aggregate mining operations would continue producing an average of 4.0 to 4.5 million tons per year (MTPY) of aggregate materials. The total average MTPY is the average production numbers of both Cemex and Robertson's operations within the Plan Area. The existing permitted mining would be mined to completion, but no additional mining permits would be expected to be issued.

With implementation of the No Action Alternative, the beneficial social and economic impacts of mining (jobs and industry transactions) would decline overtime as the aggregate resources are depleted under the current permits and leases, adversely affecting these commercial entities and their employees. However, this loss is not expected to have a significant impact on the local economy, and therefore potential impacts are less than significant.

No environmental justice impacts would occur with implementation of Alternative A, since current mining operations would continue as they normally do. No direct or indirect growth inducement would occur, and no displacement of people or existing housing would occur. Therefore, there are no impacts related to socioeconomics, environmental justice, or population and housing that are cumulatively considerable.

Alternative B: Proposed Action/Projects

From an economic standpoint, implementation of the Proposed Action/Projects would be cumulatively beneficial to individuals, families, and populations within the region. In conjunction with other mining activities in the region, mining activities in the Plan Area are expected to persist over a longer period of time and would provide economic gain in the region. Therefore, the Proposed Action/Projects would contribute a positive incremental cumulative effect on socioeconomics.

The Proposed Action/Projects do not propose construction of any homes or businesses; therefore, this alternative would not directly induce any population growth. Although an increase in employment is expected with expansion of the existing aggregate mining activities in the Plan Area, it is not expected to indirectly induce substantial population growth. Due to the unemployment rate of approximately 8.8 percent in San Bernardino County, it is anticipated that at least the majority, if not all, of the new jobs would be filled with individuals that already reside in the region.

As the Proposed Action/Projects would not result in adverse impacts related to socioeconomics, population and housing, or environmental justice it will not result in a cumulatively considerable contribution to impacts associated with these topics.

Alternative C: 2008 Land Management Plan

From an economic standpoint, implementation of the 2008 Land Management Plan would also be cumulatively beneficial to individuals, families, and populations within the region. In conjunction with other mining activities in the region, mining activities in the Plan Area are expected to persist over a longer period of time and would provide economic gain in the region. Implementation of the 2008 Land Management Plan would allow for expansion of aggregate mining on approximately 32 more acres than Alternative B: Proposed Action/Projects. Thus, implementation of the 2008 Land Management Plan would result in a larger increase in aggregate materials produced from the Plan Area. Therefore, the 2008 Land Management Plan would contribute a positive incremental cumulative effect on socioeconomics.

The 2008 Land Management Plan does not propose construction of any homes or businesses; therefore, this alternative would not directly induce any population growth. Although an increase in employment is expected with expansion of the existing aggregate mining activities in the Plan Area, it is not expected to indirectly induce substantial population growth. Due to the unemployment rate of approximately 8.8 percent in San Bernardino County, it is anticipated that at least the majority, if not all, of the new jobs would be filled with individuals that already reside in the region.

As the 2008 Land Management Plan would not result in adverse impacts related to socioeconomics, population and housing, or environmental justice it would not result in a cumulatively considerable contribution to impacts associated with these topics.

4.13.3.7 Transportation Systems and Traffic

Alternative A: No Action Alternative

Under Alternative A, no expanded mining would occur, and no other projects would be implemented. There would be no cumulative impact.

Alternative B: Proposed Action/Projects

The Proposed Action/Projects traffic impact assessment was based on an analysis of opening day (2008) and future year (2030) scenarios, which provide an assessment of potential impacts in the near-term and long-term horizons as they already consider related traffic impacts from past, present, and probable future projects. Traffic impact analyses are conducted by reviewing a list of cumulative projects and their impacts within the area. The impacts of these cumulative projects are then added the estimated impact of the Proposed Action/Projects to determine the total cumulative impacts that may be present. For impacts related to the future conditions such as in year 2030, the impacts of the listed projects are included as projections and combined with the projected year 2030 impacts of the Proposed Action/Projects to determine future cumulative impacts. Therefore, the analysis related to each of the thresholds discussed above contains a cumulative analysis of the area projects.

For analysis purposes, the cumulative projects were grouped into two areas that would be expected to have the same distribution at the study intersections. Trip generation for each of the cumulative projects was developed using rates from the Institute of Transportation Engineers (ITE) Trip Generation (7th Edition). For more information on traffic analysis methodology.

Of all the activities associated with the Proposed Action/Projects, only one activity, expanded aggregate mining and processing, was determined to have a potentially cumulative impact relative to Impact TRA-2 (conflict with an applicable congestion management program, including, but not limited to LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways). Specifically, significant and unavoidable impacts resulting from the Proposed Action/Projects would occur in both Year 2008 and Year 2030 With Project conditions for freeway segments, as discussed in Impact TRA-2 above. These significant and unavoidable impacts would contribute to transportation system and traffic cumulative impacts in the Plan Area as well.

Other cumulative projects in the area (City of Highland, Redlands, and Yucaipa) that would contribute vehicle trips on the I-210 and major roadways (Alabama Street, Orange Street, Greenspot Road) in the Plan Area include: Harmony Specific Plan (residential, commercial, parks); Tobin/Greenspot Connector (commercial); Greenspot Village (residential and commercial); TREH Partners/SBCFCD (residential and commercial); Goodman and Jerritsma (commercial and residential); Wood Bridge (residential); East Highlands Ranch (residential); Development 1 Group (residential); Mediterra (residential); Walmart Vacant Property (commercial); Redlands Sports Park (recreation); Diversified Pacific (residential); and East Branch Extension (water pipeline).

Cumulatively, the aggregate mining activities would contribute to impacts that would require mitigation. As stated earlier in this section, cumulative impacts are evaluated as a part of the Proposed Action/Project's impacts for traffic. As such any cumulative impacts would require the implementation of the mitigation measures recommended for the Proposed Action/Projects. The significant impacts are forecast to occur with or without implementation of the project and are therefore cumulative in nature.

Because several of the improvements to the affected freeway ramp intersections would be included in yet-to-be determined improvement projects sponsored by Caltrans or SANBAG, the Project proponent has no control over the specific timing of when the improvements would be constructed. As a result, these cumulative impacts remain significant and unavoidable until such time as the improvements are constructed.

Alternative C: 2008 Land Management Plan

As outlined above for Alternative B, the *Traffic Study* analyzed expanded mining as proposed in the 2008 Land Management Plan (Alternative C) which included 32 more acres of expanded mining than Alternative B (Proposed Action/Projects). Although the traffic impacts may be slightly overestimated for Alternative B, they represent anticipated impacts from expanded mining of Alternative C. Therefore, potential cumulative impacts from implementation of Alternative C would be consistent with the analysis and conclusions outlined above for Alternative B.

4.13.3.8 Visual Resources

The geographic context for the cumulative impact analysis of visual resources is the Plan Area and the viewshed from the Plan Area which includes the immediate areas surrounding the Plan Area boundary in Redlands and Highland and San Bernardino County. Past, present, and reasonably foreseeable projects considered in this analysis of cumulative impacts include City of Highland Development Projects: Harmony Specific Plan; Tobin/Greenspot Connector; Greenspot Village; TREH Partners/ SBCFCD; Goodman and Jerristma; Wood Bridge; East Highlands Ranch; Development 1 Group; Housing Project; and Mediterra Residential; City of Redlands Development Projects: Redlands Sports Park; Diversified Pacific; and East Branch Extension.

Of these projects, those that are east of Orange Street and Boulder Avenue, i.e., Wood Bridge, East Highlands Ranch and Development 1 Group, and those farther to the east, Mediterra Residential and Harmony Specific Plan are prominently in the viewshed of the Plan Area. These projects could potentially impact the visual character of the area and will need to be evaluated individually for cumulative impacts.

Under Alternative A no new Projects would occur, so there would be no cumulative impacts related to visual resources. Visual impacts from Alternatives B and C range from beneficial to moderate (negative) and they are considered significant for mining; however, they are not anticipated to dominate the landscape. Therefore, the impacts from the Proposed Action/Projects are negligible.

4.13.3.9 Cultural Resources

Alternative A: No Action Alternative

Under Alternative A no new projects would be constructed. Therefore, there would not be a cumulatively considerable impact to cultural resources.

Alternative B: Proposed Action/Projects

P-36-5526 (a historic orchard complex) that was determined eligible for the National and California Registers is located between proposed SBVMWD recharge basins (Covered Activity VD.01) and could be adversely affected by construction of this Covered Activity/project.

P-36-6062, a multiple-episode deposit of historic-period debris, was previously recorded as a historic-period domestic debris deposit composed of five loci on either side of a dirt road and is recommended as potentially eligible for the National and California Registers due to its potential significance. **P-36-6062** is located within proposed SBVMWD recharge basins (Covered Activity VD.01) and would be adversely affected by construction of this Covered Activity/project.

However, with implementation of Mitigation Measure CR-1 potential adverse impacts to these resources (**P-36-5526** and **P-36-6062**) would be reduced to less than significant levels. Other historic-period resources documented within the APE, including P-36-6068, P-36-6072, P-36-6074, and P-36-6078, are located in areas that would not be impacted by Covered Activities/projects and would be left in place. Therefore, Alternative B would not result in cumulatively considerable impacts to cultural resources.

The limited incremental effects of the Proposed Action/Projects when added to potential effects or surrounding reasonable foreseeable development and constructions projects, listed above, would not significantly contribute to a cumulative effect.

Alternative C: 2008 Land Management Plan

As with Alternative B, **P-36-5526** is located between proposed SBVMWD recharge basins and could be adversely affected by construction. **P-36-6062** is located within proposed SBVMWD recharge basins and would be adversely affected by construction. However, with implementation of Mitigation Measure CR-1 potential adverse impacts to these resources would be reduced to less than significant levels. Other historic-period resources documented within the APE, including P-36-6068, P-36-6072, P-36-6074, and P-36-6078, are located in areas that would not be impacted by Covered Activities/projects and would be left in place. Therefore, Alternative C would not result in cumulatively considerable impacts to cultural resources.

4.13.3.10 Noise***Alternative A: No Action Alternative***

Under Alternative A, no expanded mining would occur, and no other projects would be implemented. There would be no cumulative noise impact.

Alternative B: Proposed Action/Projects

The Proposed Action/Projects would not expose people working in the Plan Area to excessive noise levels from a private airstrip or public airport. Therefore, the Proposed Action/Projects in conjunction with other projects would not have a cumulative impact on the exposure of people to noise from a private airstrip or public airport.

Construction noise and groundborne vibration from aggregate mining would not exceed standards at nearby sensitive receptors. Water conservation, wells and water infrastructure, transportation, and flood control construction projects are not anticipated to result in substantial increases in ambient noise or significant groundborne vibration and implementation of Mitigation Measure NOI-1 would ensure potential impacts from construction on sensitive receptors are less than significant. Therefore, the Proposed Action/Projects in conjunction with other projects would not have a cumulative noise or groundborne vibration impact on nearby sensitive receptors.

Aggregate mining operations would not generate noise from mobile or stationary sources that would exceed standards and impacts on sensitive receptors are less than significant. Operation and maintenance of water conservation, water infrastructure, roads, and flood control facilities, and trails, habitat, agriculture would not generate noise from mobile or stationary sources that would exceed standards and potential impacts on sensitive receptors are less than significant. Therefore, the Proposed Action/Projects in conjunction with other projects would not generate noise from mobile or stationary sources that would be cumulatively considerable.

Alternative C: 2008 Land Management Plan

The 2008 Land Management Plan would not expose people working in the Plan Area to excessive noise levels from a private airstrip or public airport. Therefore, the 2008 Land Management Plan in conjunction with other projects would not have a cumulative impact on the exposure of people to noise from a private airstrip or public airport.

Construction noise and groundborne vibration from aggregate mining would not exceed standards at nearby sensitive receptors. Water conservation, wells and water infrastructure, transportation, and flood control construction projects are not anticipated to result in substantial increases in ambient noise or significant groundborne vibration and implementation of Mitigation Measure NOI-1 would ensure potential impacts from construction on sensitive receptors are less than significant. Therefore, the 2008 Land Management Plan in conjunction with other projects would not have a cumulative noise or groundborne vibration impact on nearby sensitive receptors.

Aggregate mining operations would not generate noise from mobile or stationary sources that would exceed standards and impacts on sensitive receptors are less than significant. Operation and maintenance of water conservation, water infrastructure, roads, and flood control facilities, and trails, habitat, agriculture would not generate noise from mobile or stationary sources that would exceed standards and potential impacts on sensitive receptors are less than significant. Therefore, the 2008

Land Management Plan in conjunction with other projects would not generate noise from mobile or stationary sources that would be cumulatively considerable.

4.13.3.11 Hazards

Alternative A: No Action Alternative

As no projects would be implemented under Alternative A, there would be no direct or indirect effects related to hazards or use or spill of hazardous materials. As Alternative A would not result in adverse impacts related to hazards they would not result in a cumulatively considerable contribution to impacts associated with this topic.

Alternative B: Proposed Action/Projects

The Proposed Action/Projects are not anticipated to result in substantial direct or indirect effects involved with hazards or hazardous materials. Mining activities would continue and would be expanded over time in areas adjacent to existing mining activities. The additional use of hazardous materials would occur for expanded mining activities but would follow current practices administered when dealing with materials considered hazardous. Therefore, expanded mining activities would not considerably increase hazardous risks to people, structures, or the environment associated with the use of hazardous materials.

Construction, operation and maintenance of water conservation facilities, flood control facilities, wells and water infrastructure and expansion of roadways would involve temporary use of potentially hazardous materials (such as fuel and lubricants used with construction equipment), however, the amount of hazardous materials would be considered relatively small and use in the Plan Area would be temporary. Ongoing operations and maintenance of these facilities as well as the citrus grove may use small amounts of potentially hazardous materials, but no considerable amounts of hazardous materials would be involved in day-to-day activities. The designation and construction of trails and habitat restoration and maintenance activities would not use considerable amounts of hazardous materials. Compliance with Federal, State, and local regulations associated with the routine transport, use, or disposal of hazardous materials would not cause a significant impact to the public or environment.

As the Proposed Action/Projects would not result in adverse impacts related to hazards they would not result in a cumulatively considerable contribution of impacts associated with hazards.

Alternative C: 2008 Land Management Plan

Under Alternative C, implementation of the 2008 Land Management Plan is not anticipated to result in substantial direct or indirect effects involved with hazards or hazardous materials. Therefore, Alternative C would not result in a cumulatively considerable contribution of impacts associated with hazards.

4.13.3.12 Recreation

Past and present projects have resulted in an increase in recreational facilities in the area. These projects have provided a beneficial cumulative effect because of the continued operation and management of available park lands and recreational opportunities to the public.

Alternative A: No Action Alternative

Under Alternative A no new trails or other recreational facilities would be developed. There would be no cumulative impacts.

Alternative B: Proposed Action/Projects

Cumulatively, Alternative B would potentially increase the number of recreational facilities through the development of trails in the area. This would allow Cities of Redlands and Highland to complete the portions of their respective master plans for trails that were compatible with trails approved through implementation of the HCP. Implementation of Alternative B would result in a positive benefit to recreation by providing additional recreational trails open to the public and an opportunity to enjoy and appreciate the natural area around them.

The establishment of new trails in the Plan Area could result in increased use of adjacent park facilities if alternative parking is not provided in the form of the establishment of new trailheads adjacent to the Plan Area to serve the new trails. This increase in use is not expected to be significant. Planned residential development projects outside of the Plan Area may result in additional use of recreational facilities; however, development projects are required to pay development impact fees and/or construct parks or other recreational amenities to offset individual project impacts.

The future development of trailheads adjacent to the Plan Area to serve the proposed trails and other regional trails is reasonably foreseeable and could result in small amounts of additional permanent impacts to Covered Species' habitat. Parks in planned residential developments are expected to have adverse effects on the environment. However, the anticipated impacts from the trails planned under Alternative B do not constitute and cumulatively considerable incremental contribution to the impact of recreational facilities on the environment. In sum, the development of trails within the Plan Area, in conjunction with other projects in the area, are not significant.

Alternative C: 2008 Land Management Plan

Cumulatively, Alternative C would potentially increase the number of recreational facilities through the development of trails in the Plan Area. However, trail development would not include the extension of the SART. Like Alternative B, Alternative C would allow Cities of Redlands and Highland to complete the portions of their respective master plans for trails that were compatible with trails approved through implementation of the HCP. Implementation of Alternative C would result in a positive benefit to recreation by providing additional recreational trails open to the public and an opportunity to enjoy and appreciate the natural area around them.

The establishment of new trails in the Plan Area under Alternative C could result in increased use of adjacent park facilities, if alternative parking is not provided in the form of the establishment of new trailheads adjacent to the Plan Area to serve the new trails. This increase in use is not expected to be significant. Planned residential development projects outside of the Plan Area may result in additional use of recreational facilities; however, development projects are required to pay development impact fees and/or construct parks or other recreational amenities to offset individual project impacts.

The future development of trailheads adjacent to the Plan Area to serve the proposed trails and other regional trails is reasonably foreseeable and could result in small amounts of additional permanent impacts to Covered Species' habitat. Parks in planned residential developments are expected to have adverse effects on the environment. However, the anticipated impacts from the trails planned under Alternative C do not constitute and cumulatively considerable incremental contribution to the impact of recreational facilities on the environment. In sum, the proposed development of trails within the Plan Area, in conjunction with other projects in the area, is not significant.

4.13.4 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Irreversible commitments of resources are those resources that cannot be reversed or are lost for an extremely long period of time. Irretrievable commitments of resources are those that are lost for a short period of time (usually for the time period for which the resources are used) and that would be restored over time. This includes the use of nonrenewable resources such as metal, wood, fuel, mineral resources, and other natural or cultural resources.

4.13.4.1 Air Quality and Greenhouse Gases

The Plan Area is located within a portion of the Basin that is designated as nonattainment for PM₁₀ by the state, as well as nonattainment for ozone (O₃), and PM_{2.5} under both the state and federal standards (see Section 3.1, **Table 3.1-1**). The control measures and related emission reduction estimates included in the AQMP are based upon emissions projections for a future development scenario derived from land use, population, and employment estimates defined in consultation with local governments. Accordingly, if a project demonstrates compliance with local land use plans and/or population projections, then the AQMP would have taken into account such uses when it was developed, and the Proposed Projects would not conflict with implementation of the plan.

The Proposed Action/Projects would be consistent with the AQMP and would not obstruct implementation of its programs. Total short-term construction emissions that would result from grading activities and from equipment exhaust for the mining haul road and other proposed small projects do not exceed regional daily SCAQMD thresholds. The emissions of NO_x, PM₁₀, and PM_{2.5} from expanded mining operations are expected to exceed the SCAQMD thresholds and are expected to exceed State AAQS and thus, long-term regional impacts remain significant and unavoidable. 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. Thus, as operational emissions of NO_x, PM₁₀, and PM_{2.5} would exceed the SCAQMD thresholds, even after implementation of mitigation measures, and would have a cumulatively considerable net increase in these emissions and potential for irreversible and/or irretrievable commitments of good air quality.

4.13.4.2 Geology and Mineral Resources

There will be an irreversible and irretrievable commitment of aggregate resources with implementation of the Proposed Action/Projects. The expanded mining activities would continue to extract aggregate from the Plan Area. This aggregate is used for construction throughout the region and is not retrievable. Although the natural alluvial processes of the Santa Ana River would result in the transport of aggregate resources from upstream areas into the Plan Area the time it would take to replenish the aggregate being removed is so much greater than the rate of extraction that the expanded mining activities are also considered an irreversible commitment of resources.

4.13.4.3 Hydrology and Water Quality

The modification to the Santa Ana River, Plunge Creek and City Creek washes, floodplains and associated habitats from expansion of mining activities are considered an irretrievable commitment of resources as they are lost for a short period of time. The hydrology of riverine areas in the Wash Plan support habitat for federally listed threatened or endangered species. Although implementation of the Mining and Reclamation Plans will help restore some of the riverine hydraulic function and values of quarried areas, the mining activities are considered an irreversible commitment of resources as the riverine hydraulic functions and values for habitat are lost for an extremely long period of time. Filling the quarries with aggregate through the natural hydrology of the alluvial process would be required to fully restore the riverine hydraulic functions and values of the quarried areas, which could take hundreds of years.

Although the construction activities (wells, new recharge basins, mining haul route, roadway expansions) will not affect large areas they will result in the permanent alteration of natural hydraulic functions by removal of any vegetation, compaction of the soils or installation of pavement, concrete and/or rip-rap. The conversion of these areas from natural or disturbed-natural to developed is considered an irretrievable and irreversible commitment of natural hydraulic functions.

4.13.4.4 Biological Environment

The modification to the Santa Ana River, Plunge Creek and City Creek washes, floodplains and associated habitats from expansion of mining activities are considered an irretrievable commitment of resources as they are lost for a short period of time. The riverine areas in the Plan Area support habitat for federally listed threatened or endangered species. Although implementation of the Mining and Reclamation Plans will help restore some of the riverine function and values of quarried areas, the mining activities are considered an irreversible commitment of resources as the riverine functions and values are lost for an extremely long period of time. Filling the quarries with aggregate through the natural alluvial process

would be required to fully restore the riverine functions and values of the quarried areas, which could take hundreds of years.

Although the construction activities (wells, new recharge basins, mining haul route, roadway expansions) will not affect large areas they will result in the permanent alteration by removal of any vegetation, compaction of the soils or installation of pavement, concrete and/or rip-rap. The conversion of these areas from natural or disturbed-natural to developed is considered an irretrievable and irreversible commitment of habitat.

4.13.4.5 Land Use

The following land uses currently take place in the Plan Area: mining, flood control, water conservation, habitat conservation, water utilities, and open space. These land uses will continue to take place in the Plan Area should the Proposed Action/Projects be implemented; the changes are the locations and amount of land devoted to each use. Habitat restoration and recreation (trails) are new proposed uses within the Plan Area.

4.13.4.6 Visual Resources

The expansion of mining activities and construction of various projects (wells, new haul road, expanded roadways, recharge basins) in the Plan Area would primarily affect near views, which are considered to be points of view that are observed at close range. Prime views, those that are considered to be scenic views of the mountains, would not be affected by the proposed covered activities. As the covered activities are consistent with the existing uses and facilities located in the Plan Area they would not result in an irreversible or irretrievable commitment of visual resources.

4.13.4.7 Cultural Resources

The expansion of mining activities and construction of various projects (wells, new haul road, expanded roadways, recharge basins) in the Wash Plan Area could have the potential for irreversible and/or irretrievable commitments of resources. The APE consists of the horizontal and vertical limits of Proposed Projects and includes the area within which significant impacts or adverse effects to “historic property” under Section 106 of the NHPA and a “historical resource” under CEQA could occur. Proposed Projects such as aggregate mining, new recharge basins, well and pipeline infrastructure, would include grading or excavation. Thus, the vertical APE includes all subsurface areas where archaeological deposits could be affected. Implemented mitigation measures would greatly reduce the potential for irreversible and/or irretrievable commitments of resources.

4.13.5 SHORT-TERM USE VERSUS LONG-TERM PRODUCTIVITY OF THE ENVIRONMENT

4.13.5.1 Air Quality and Greenhouse Gases

Short-term use includes temporary construction and grading activities and the continued and expanded mining activities to extract aggregate from the Wash Plan Area. Long-term impacts are usually associated with build-out conditions and long-term operations of a project. The emissions of NO_x, PM₁₀, and PM_{2.5} from expanded mining operations are expected to exceed the SCAQMD thresholds and are expected to exceed State AAQS. While there are control measures regulating emissions of heavy-duty vehicles, there is no way to quantify the reduction of these emissions. Long-term regional impacts remain significant and unavoidable.

4.13.5.2 Geology and Mineral Resources

Short-term use includes the continued and expanded mining activities to extract aggregate from the Wash Plan Area. This aggregate is used for construction throughout the region. The mining activity contributes to the local economy as a source of employment and sales tax. Although the natural alluvial processes of the Santa Ana River would result in the transport of aggregate resources from upstream areas into the Wash Plan Area it would take a very long time, anticipated to be hundreds of years, to replenish the aggregate being removed. Therefore, implementation of the Proposed Action/Projects would allow for the short-term extraction of aggregate for use in the region which will reduce the amount of this resource locally available in the long-term.

4.13.5.3 Hydrology and Water Quality

Short-term disturbances to surface water runoff within portions of the Wash Plan Area would result from construction and grading activities. Construction and grading activities would be short-term and considered less than significant impacts with the required implementation of mitigation measures. Mining operations could have a potential for long-term impacts, but those impacts would be less than significant due to mandated compliance with mining permits and other applicable regulations. As identified in the Cemex and Robertson's Mining and Reclamation Plans, mining would be restricted to no less than 20 feet above ground water, with no operations allowed in standing groundwater. Existing monitoring wells would be used to monitor groundwater levels and to determine the depth to groundwater.

4.13.5.4 Biological Environment

The purpose of the HCP is for conservation of species and habitat in the Plan Area. The HCP will provide the conservation of federally- and state-listed Santa Ana River woolly-star, slender-horned spineflower, and the federally-listed California gnatcatcher and San Bernardino kangaroo rat, as well as the State Species of Special Concern-listed coastal cactus wren. The federally-listed endangered SBKR and

California gnatcatcher are known to occur within the Wash Plan Area and the Service has designated portions of the Wash Plan Area as critical habitat for SBKR.

Southern California's biodiversity has diminished as urban growth has caused wildlife habitat to become more fragmented, forming isolated small blocks of land and causing endangered species conflicts. Although the covered activities will result in short-term take of federally- and state-listed plant and wildlife species it will significantly contribute to the long-term productivity of the environment to continue to support these species. Implementation of the Plan helps accomplish the urgent need to preserve remaining biodiversity in Southern California without halting aggregate mining, water conservation and other uses.

4.13.5.5 Land Use

Land use within the Wash Plan Area combines a diverse arrangement of projects and land uses, of which predominantly involves new development of aggregate mining and new habitat conservation of federally- and state-listed habitats. Thus, long-term productivity of the land uses within the Wash Plan Area is considered a best-case scenario to balance the uses and demands of highly valuable aggregate land, such as habitat conservation, aggregate mining, water conservation, flood control, recreation, transportation and other uses. Long-term productivity of the environment would be deemed most beneficial.

4.13.5.6 Socioeconomics, Population and Housing, and Environmental Justice

Short-term construction and grading activities could result in employment that would benefit the local labor supply, such as with construction equipment and materials suppliers and service businesses that directly support construction workers. This increase in employment and economic gains, although beneficial, would not be of great enough magnitude to substantially alter existing population patterns, housing demand, or subsequently, socioeconomic conditions within or surrounding the Plan Area. However, long-term productivity of the environment would translate to an overall beneficial socioeconomic impact.

4.13.5.7 Transportation Systems and Traffic

While not significant, short-term construction and grading activities would result in some increase in traffic that would be temporary in nature. With mitigation measures implemented, the long-term operations and maintenance activities would have a minor benefit for the productivity of the local environment. However, mining and operations would result in potentially significant long-term impacts to freeway segments that traverse the region in year 2030. Because improvements to the freeway segments are under the authority of Caltrans, there is no mechanism for development Project proponents to pay fees or make fair-share contributions toward improving mainline freeway lanes. Long-term productivity related to transportation is minorly beneficial to the local systems, but potentially adverse to freeway segments for the region.

4.13.5.8 Visual Resources

Construction and grading activities would have short-term visual impacts within the Wash Plan Area. While not significant, mining activities would create the greatest impact to visual resources. Over the long-term impacts to visual resources would range from beneficial to moderate(negative) and are considered significant for mining; however, they are not anticipated to dominate the landscape.

4.13.5.9 Cultural Resources

Short-term construction and grading activities could have potential adverse or beneficial impacts related to cultural resources as these resources could be uncovered during construction and grading activities. Cultural resources being uncovered during these activities could cause damage to the resource but could also educate people about the cultural resources in the area. Long-term productivity of cultural resources for the area is difficult to estimate. It could be beneficial and/or could be adverse, but would not be significantly adverse.

4.13.6 GROWTH INDUCING IMPACTS

Section 15126 of the *CEQA Guidelines* requires that an EIR discuss a Project's potential to foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. The *CEQA Guidelines* also indicate that it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment. This section of the EIR analyzes such potential growth-inducing impacts, based on criteria suggested in the *CEQA Guidelines*.

In general terms, a Project may foster spatial, economic, or population growth in a geographic area if it meets any one of the following criteria:

1. Remove an impediment to growth (e.g., establish an essential public service or provide new access to an area);
2. Foster economic expansion or growth (e.g., change revenue base, expand employment, etc.);
3. Foster population growth (e.g., construct additional housing), either directly or indirectly;
4. Establish a precedent-setting action (e.g., an innovation, a change in zoning, or a general plan amendment approval); or
5. Develop or encroach on an isolated or adjacent area of open space (distinct from an "infill" type of Project).

Should a Project meet any one of the above-listed criteria, it may be considered growth inducing. The potential growth-inducing impacts of the proposed Project are evaluated against these five criteria in this section.

Section 15126.2(d) of the *CEQA Guidelines* requires that an EIR “discuss the ways” a Project could be growth inducing and to “discuss the characteristics of some Projects that may encourage activities that could significantly affect the environment”. However, the *CEQA Guidelines* do not require that an EIR predict (or speculate), specifically where such growth would occur, in what form it would occur, or when it would occur. The answers to such questions require speculation, which CEQA discourages (see *CEQA Guidelines* §15145).

4.13.6.1 Alternative A: No Action Alternative

The No Action Alternative does not include the construction of housing that would directly increase the population in the Plan Area or surrounding areas.

Existing mining operations, as allowed under the current permits and leases, would not have a substantial increase in jobs that would foster economic or population growth to indirectly increase the need for the construction of additional housing in the area.

The No Action Alternative is not anticipated to foster substantial economic or residential growth in the region; potential impacts from growth inducement are less than significant. No further analysis is included in this DEIS/SEIR.

4.13.6.2 Alternative B: Proposed Action/Projects

Section 15126.2(d) of the *CEQA Guidelines* identifies a project to be growth inducing if it fosters economic or population growth, or the construction of additional housing either directly or indirectly, in the surrounding environment.

The Proposed Action/Projects do not include the construction of housing that would directly increase the population in the Plan Area or surrounding areas.

The Proposed Action/Projects would allow for expanded mining production and associated new jobs. However, the expanded mining is not expected to have a substantial increase in jobs that would foster economic growth and indirectly foster population growth. The Plan Area is located in a region of southern California with a poor jobs-to-housing ratio. Thus, it is anticipated that any new jobs generated by the Proposed Action/Projects would likely be filled by existing residents in the region.

The other Proposed Projects (construction of new wells, flood control, street improvement, and drainage facilities and maintenance of these types of facilities) are not expected to generate substantial new jobs, as much of this work is anticipated to be completed by individuals already living in the region

and employed by the Conservation District, the Cities of Redlands and Highland, the County of San Bernardino or construction companies that complete contract work from these agencies.

The approval of development type projects (i.e. residential, commercial or industrial development) does not fall under the jurisdiction of the Conservation District, USFWS. Any development type projects, if proposed, would fall under jurisdiction of the local governmental entity in which they are located. Within the Plan Area the local governmental entities with jurisdiction over land uses are of the City of Highland, City of Redlands and the County of San Bernardino. Future development within the Cities of Redlands and Highland and the County of San Bernardino are guided by their respective General Plans. The expanded mining would support growth in the region by providing locally available aggregate for construction of development projects. The expansion of aggregate mining is in response to the demand for aggregate products created by existing population growth in the region.

The Proposed Action/Projects are not anticipated to foster substantial economic or residential growth in the region; potential impacts from growth inducement are less than significant. No further analysis is included in this DEIS/SEIR.

4.13.6.3 Alternative C: 2008 Land Management Plan

The 2008 Land Management Plan does not include the construction of housing that would directly increase the population in the Plan Area or surrounding areas.

The 2008 Land Management Plan would have allowed for 32 more acres of new mining as compared to the 2019 HCP. However, consistent with the Proposed Action/Projects, the expanded mining is not expected to have a substantial increase in jobs that would foster economic growth and indirectly foster population growth. The Plan Area is located in a region of southern California with a poor jobs-to-housing ratio. Thus, it is anticipated that any new jobs generated by the Proposed Action/Projects would likely be filled by existing residents in the region.

The other Proposed Projects (construction of new wells, flood control, street improvement, and drainage facilities and maintenance of these types of facilities) are not expected to generate substantial new jobs, as much of this work is anticipated to be completed by individuals already living in the region and employed by the Conservation District, the Cities of Redlands and Highland, the County of San Bernardino or construction companies that complete contract work from these agencies.

The 2008 Land Management Plan is not anticipated to foster substantial economic or residential growth in the region; potential impacts from growth inducement are less than significant. No further analysis is included in this DEIS/SEIR.

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