

6.0 ALTERNATIVES

CEQA Guidelines § 15126.6 requires that an EIR include a discussion of reasonable project alternatives that would feasibly attain most of the basic objectives of the project while avoiding or substantially reducing one or more of the significant effects of the project. *CEQA* further states that the discussion of alternatives must focus on alternatives that reduce project-related impacts "...even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly."

If the Upper Santa Ana River Wash Planning Area (Planning Area) were to remain in its current condition and mining were to be limited to existing permitted areas (the No Project Alternative), the sum of impacts associated with the proposed project would be avoided; therefore, the No Project Alternative would be the environmentally superior alternative. If the environmentally superior alternative is determined to be the No Project Alternative, the Environmental Impact Report (EIR), according to the *CEQA Guidelines*, must also identify an environmentally superior alternative among the other alternatives, if the analysis indicates that significant impacts can be avoided by one or more alternatives. (*CEQA Guidelines*, § 15126.6(e)(2).)

6.1 ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD FOR ANALYSIS

In determining an appropriate range of alternatives to be evaluated in this EIR, a total of nine possible alternatives were initially considered. Of those nine possibilities, five were given brief review and dismissed from further evaluation. Those five alternatives that have been dismissed from detailed review are briefly described in Sections 6.1.1-6.1.5 below. Four alternatives from the nine initial possibilities are evaluated in detail in Section 6.2.

The purpose of the proposed project is to allow the continued use of land for water conservation, flood control, groundwater production, and mineral resource extraction while maintaining the biological and hydrological resources of the Planning Area in an environmentally sensitive manner. The Upper Santa Ana River Wash Land Management and Habitat Conservation Plan (Wash Plan) is intended to coordinate and manage the present and future activities in the Wash, which are part of multiple jurisdictions, each with different needs. The goal of the proposed project is to balance the ground-disturbing activities of aggregate mining, recreational activities, water conservation, and other public services with high quality natural habitat for endangered, threatened, and sensitive species. Objectives of the proposed project are:

- Ensure the continued ability of the District to replenish the Bunker Hill Groundwater Basin with native Santa Ana River water using existing and potential future water recharge facilities in the Planning Area;
- Ensure the continued ability of the SBCFCD to protect land and property by managing the floodwaters of the Santa Ana River and its local tributaries (Mill Creek, Plunge Creek, and City Creek);
- Set aside and maintain habitat for sensitive, threatened, or endangered species populations on the project site, and prevent colonization by non-native plants and animals, as mitigation for impacts from other aspects of the project, such as mining, designation of areas for future roadways or water spreading facilities;
- Accommodate the relocation and expansion of aggregate mining quarries, to help ensure long-term availability of high quality aggregate reserves located within the Planning Area for local and regional use, consistent with the MRZ-2 designation for reserves in this area, and do so on land adjacent to existing quarries, that have mostly been disturbed;

- Accommodate arterial roads and highways to provide safe modes of travel; and
- Provide trails for public enjoyment of the existing environment.

The need for the Santa Ana River Wash Land Management Plan and corresponding Habitat Conservation Plan exists due to the unique combination of environmental and societal (economic and demographic) factors present in the Planning Area. The Planning Area combines a relatively large open space that is habitat for several listed species, with soil and hydrology conditions making it particularly suitable for groundwater recharge and water conservation uses. The same geologic features, and the sediments created over time by the flows over the Santa Ana Wash area, mean the Planning Area is also one that has high quality aggregate reserves. The intersection of prime locations for mining, water conservation and habitat areas is not known to exist anywhere else in the Santa Ana River drainage area. Therefore, alternative locations for the project were not analyzed, due to infeasibility of finding a similarly sized site that would meet the project goals, and objectives of managing multiple resources within the Planning Area in light of competing demands.

The following five alternative scenarios were considered and rejected as potential alternatives to implementation of the proposed project:

- Off-Site Location Alternative;
- Decreased Permitted Mining Depths Alternative;
- Exclusion of District and BLM Land Exchange Alternative;
- Additional Lands for District and BLM Land Exchange Alternative; and
- Limited Mining Operations in Project Locations Alternative.

The reason or reasons for not selecting each of the rejected alternatives is discussed below.

6.1.1 Off-Site Location Alternative

The *CEQA Guidelines* (§ 15126.6[f][2][A]) state that an environmental document shall determine “whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR.”

Here, a fundamental impetus for the Project was the reconciliation of competing demands for mining, water conservation, and habitat preservation in the Planning Area. In a very fundamental sense, the location of the Planning Area is the Project, because the Project allocates portions of the Planning Area for the various competing uses. In this sense, no alternative location for the Project can be considered, because harmonizing the uses with the Planning Area is a fundamental purpose of the Project. Notwithstanding the above, the primary reason for looking at an alternative location would be to reduce biological impacts. The other adverse environmental impacts of air quality, noise, traffic, and aesthetics would not likely be reduced, as the mining operations would create the same or similar impacts in another location. However, because of the nature of aggregate mining, quarries can only be located where marketable aggregate supplies are available to be mined, crushed, screened, and sold for construction material. Additionally, any alternative mining site would have to be close enough to Robertson’s East Basin Processing Plant and Cemex’s Orange Street Processing Plant to avoid increasing the length of haul trips or creating the need to develop a new haul road(s).

The State Geologic Survey Team, under the auspices of the SMARA, mapped the aggregate resources in San Bernardino County in 1987.¹ The Planning Area was classified as MRZ-2, which is

¹ California Department of Conservation, Division of Mines and Geology, *Mineral Land Classification of the Greater Los Angeles Area, Special Report 143, Part VII, Classification of Sand and Gravel Resource Areas, San Bernardino Production-Consumption Region.*

an area where adequate information indicates that significant mineral deposits are present or where it was judged that a high likelihood for their presence exists. The nearest comparable aggregate resource area or undeveloped area designated MRZ-2 is located in the Santa Ana River Channel located southwest of the Planning Area (Figure 4.10.3).

The Santa Ana River is considered an active river channel. Areas within waterways are generally not open to mining, and other activities are restricted at the State level. Additionally, if mining were permitted in active river channels, specialized equipment would need to be purchased by the mining companies, which would change their mining operations. There would be a greater likelihood of water pollution and the possibility of greater noise impacts because of the closer proximity to developed areas. In addition, any exploration of reserves within the Santa Ana River channel would face stringent permitting requirements, including possible 404 permits from the ACOE and/or a Streambed Alteration Agreement with DFG. Considering the river channel as an alternative location was determined to be infeasible due to the likelihood that mining operations as currently conducted would not be feasible, and special equipment and permits would be necessary to mine an active riverbed.

The other nearby MRZ-2 aggregate resource area is located north of the Planning Area within the City of Highland. With existing housing and proposed commercial development in this area, mining activities would be an incompatible land use and would result in greater environmental impacts. Since aggregate mining can only occur where the aggregate is available, and the nearby available aggregate resources cannot be mined without greater environmental impacts occurring, the off-site alternatives for aggregate mining were not selected for further evaluation.

6.1.2 Decreased Permitted Mining Depths Alternative

The proposed project would permit the mining companies to increase mining depths in all of their existing quarries. To possibly lessen the prospect of groundwater contamination created from mining operations, an alternative with decreased mining depths was considered. Under this alternative, there would at least conceivably be less of a possibility that groundwater contamination would occur at shallower excavation depths, with more distance to the water table.

It was determined that because the water table varied from year to year, decreasing the mining depths would not necessarily decrease the risks related to groundwater contamination. Further, as part of the proposed project, the mining operators will limit mining to within 20 feet of the groundwater table. By setting the distance to groundwater as the determining variable on mining depth, the mining operations could protect groundwater quality while still being able to utilize the quarries during drought or low groundwater conditions. Therefore, as this alternative would not necessarily lessen the chance of water contamination, it was not explored further.

In addition, the management of groundwater recharge (and consequently groundwater table levels), has recently undergone a broad, institutional change. The Integrated Water Management Plan, led by the San Bernardino Valley Municipal Water District, has recently been approved by a number of other water districts, including the District. This plan requires an iterative annual development of groundwater recharge targets and identification of recharge areas, subject to approval of a Basin Technical Advisory Committee, to respond to shifting circumstances on water supply, facilities availability, groundwater basin conditions, and regional demand. It is at this point not possible to predict how that new groundwater management system will function in practice, since the IRWMP was promulgated and adopted only this year. The new system does provide for multi-party input and an annual assessment of groundwater basin conditions, however, that will allow for pit depths to be considered as part of the annual groundwater management plan development, to minimize potential water quality threats from mining pit excavations. Working with the proposed project, this groundwater management scheme can achieve the same groundwater protection goals as a shallower mining depth alternative, without sacrificing the availability of regionally-required aggregate supplies, or mining revenues.

6.1.3 Exclusion of District and BLM Land Exchange Alternative

The BLM and the District jointly considered the possibility of implementing the proposed project without completing an exchange of lands. With this alternative, the BLM would be required to amend its land use plan, the 1994 *South Coast Resource Management Plan and Record of Decision*, to allow sales of aggregate materials on the public lands proposed for aggregate mining with the proposed project. Also with this alternative, rather than exchange its lands in the southeast ¼ of Section 9 and the north ½ of Section 12, Township 1 South, Range 3 West, the District would set aside these lands for habitat conservation purposes.

The BLM concluded development of the aggregate resources on the federal lands would be limited by environmental constraints, as well as being contrary to earlier agreements BLM has entered into prohibiting mineral extraction activities on BLM-owned properties within the Planning Area. Similarly, the Conservation District determined that the loss of mining revenues that presently help support its water conservation activities made this alternative infeasible. Loss of such revenues would similarly threaten the long-term funding necessary to establish and maintain management of the habitat conservation areas the District would have to establish under such an alternative, under either the Habitat Enhancement Plan, or the eventual Habitat Conservation Plan. Thus, this alternative was eliminated from detailed consideration.

6.1.4 Additional Lands for District and BLM Land Exchange Alternative

The BLM and the District initially considered an exchange that would have included additional public lands and additional lands owned by the District. The additional public lands considered were a portion of the Seven Oaks Dam borrow pit, which the District used for groundwater recharge purposes prior to construction of the Seven Oaks Dam, and continues to be needed for future groundwater recharge. The additional lands owned by the District, which would have been part of the exchange, are partially encumbered by a conservation easement for the Santa Ana River Woollystar Preservation Area.

The BLM and the District concluded that the use of public lands within the Seven Oaks Dam borrow pit could be accommodated through a right-of-way, and the exchange of these public lands was not an essential component of the proposed project. Additionally, the BLM concluded that the acquisition of lands previously encumbered by a conservation easement would not be in the public interest. Therefore, this alternative was eliminated from detailed consideration.

6.1.5 Limited Mining Operations in Project Locations Alternative

This alternative was considered in order to limit traffic impacts, air quality impacts, and noise impacts of the proposed project, while providing for continuation and expansion of the mining operations into the mining expansion areas proposed as part of the project. For the Limited Mining in Project Locations Alternative, the tonnage permitted to be mined and processed per year would be the same as is currently being processed by the two mining plant facilities. The mining operations would be conducted at the same location and have the same acreage as the proposed project; however, the tonnage processed would be limited to 4.5 million tons per year total for both Cemex and Robertson's.

With this alternative, the mining companies would use their existing internal haul roads and existing transportation routes. Orange Street would continue to be utilized by Cemex for transportation of sand and gravel from its Orange Street Processing Plant. Robertson's would continue to utilize Alabama Street as the point of ingress and egress for the products from its processing plant. All the other components would remain the same as the proposed project. In addition to the mining land use described above, this alternative includes the same land uses as the proposed project. The Habitat Conservation Area, Santa Ana River Woollystar Preservation Area, Water Conservation Area, and

Flood Control Area are the same as in the proposed project. In addition, the utilities, trails and recreation, and BLM land exchange would be the same as the proposed project.

This alternative was rejected because the limitation of the mining production means that the mining permit applicants would not fund the 5th Street access road, according to the operators. The Miners have indicated that their willingness to shift their leased areas for mining to the current BLM properties, as well as their willingness to fund the studies and mitigation measures required for the Project, was contingent on their understanding and expectation that annual production would be increased from actual current levels of 4.5 MTPY. As such, the traffic and circulation benefits, as well as safety benefits of reducing the truck traffic from public rights of way would be lost. The City of Highland has indicated that this traffic improvement measure is a critical component in its willingness to consider the expansion of the mining acreage permitted under the Project, and there are serious questions regarding the likelihood, or feasibility, of securing the necessary permits for the Project's mining quarry layouts. As such, this alternative was not pursued for further detailed consideration.

6.2 ALTERNATIVES ANALYSIS

The following alternative scenarios have been identified as potentially feasible alternatives to the proposed project and were, therefore, considered in detail as discussed on the following pages.

- **Alternative 1: No Project Alternative**

The No Project Alternative (Figure 6.1) would not change the activities that are currently taking place within the project area. Aggregate mining would continue as it does now in the baseline condition of the project producing 4.5 MTPY. No changes to habitat areas would take place, no new trails or public road rights-of-way would be established and no land exchanges would take place. Under the No Project Alternative, the mining operators are presumed to mine to completion the existing permitted mining acreage of 832 acres, but no additional mining permitting is presumed.¹ Total estimated available tonnage of aggregate under this alternative is 43 million tons.² This compares to 184 tons expected for the proposed project.

- **Alternative 2: Expanded Mining/Reduced Water Conservation and Habitat Alternative**

Alternative 2 (Figure 6.2) allows the largest area to be dedicated to expanded aggregate mining, and the least amount of area dedicated to water conservation. Water conservation would be limited to the reclaimed borrow pit in the northeast portion of the Planning Area. Habitat preservation would be reduced due to expanded mining and no land exchange. Alternative 2 expands mining throughout the north-central portion of the project area into the northeast portion to include more mining acreage than the proposed project, although the amount of yearly aggregate production would remain the same as the proposed project at 6 MTPY. Alternative 2 is expected to yield approximately 220 tons of aggregate, as compared to 184 million tons for the proposed project. This alternative basically presumes mining of the Planning Area to the extent of existing mineral leases, and therefore extends mining into the north half of Section 12 (Cemex), the Cone Camp Quarry in Section 7 (Robertson's), and presumes the continuation of existing silt pond activities permitted on existing BLM property in Section 10. This alternative would involve no land exchanges between either the District and BLM nor Robertson's and the SBCFCD. This alternative would require approval from MWD for a haul road crossing across its Inland Feeder Pipeline right of way between Sections 12 and 7.

¹ Actual mining acreage could go as high as 903 acres, if the land under the Orange Street Processing Plant and additional land in the Alabama Street Northwest Quarry, both currently permitted, are mined. Because this would require revisions to existing permits with the City of Redlands, and entails issues regarding how the plant would be modified or relocated, however, the conservative presumption is that mining would be limited to 832 acres, and that is what is used here.

² Tonnage estimates for each of the alternatives discussed in detail were provided by way of e-mail communication from Marty Derus, Lilburn Corp. March 3, 2008.

The new 5th Street access would be constructed under this alternative, and annual mining production would be the same as the Project, 6 MTPY. Old Rail Line Trail and Cone Camp Trail would be lost to mining, and there would be no connection to the Borrow Pit South Rim Trail. Alabama and Greenspot trails would continue, and the project would continue with the biological clearance for additional rights of way on Alabama, Greenspot, and Orange Street/Boulder Avenue.

This alternative would lessen the significant impact recognized from the Project of long-term loss of available mineral reserves, since significantly greater amounts of acreage the Project does not propose to mine would become available to meet regional aggregate demand. In most other respects, however, environmental effects would be greater under this alternative.

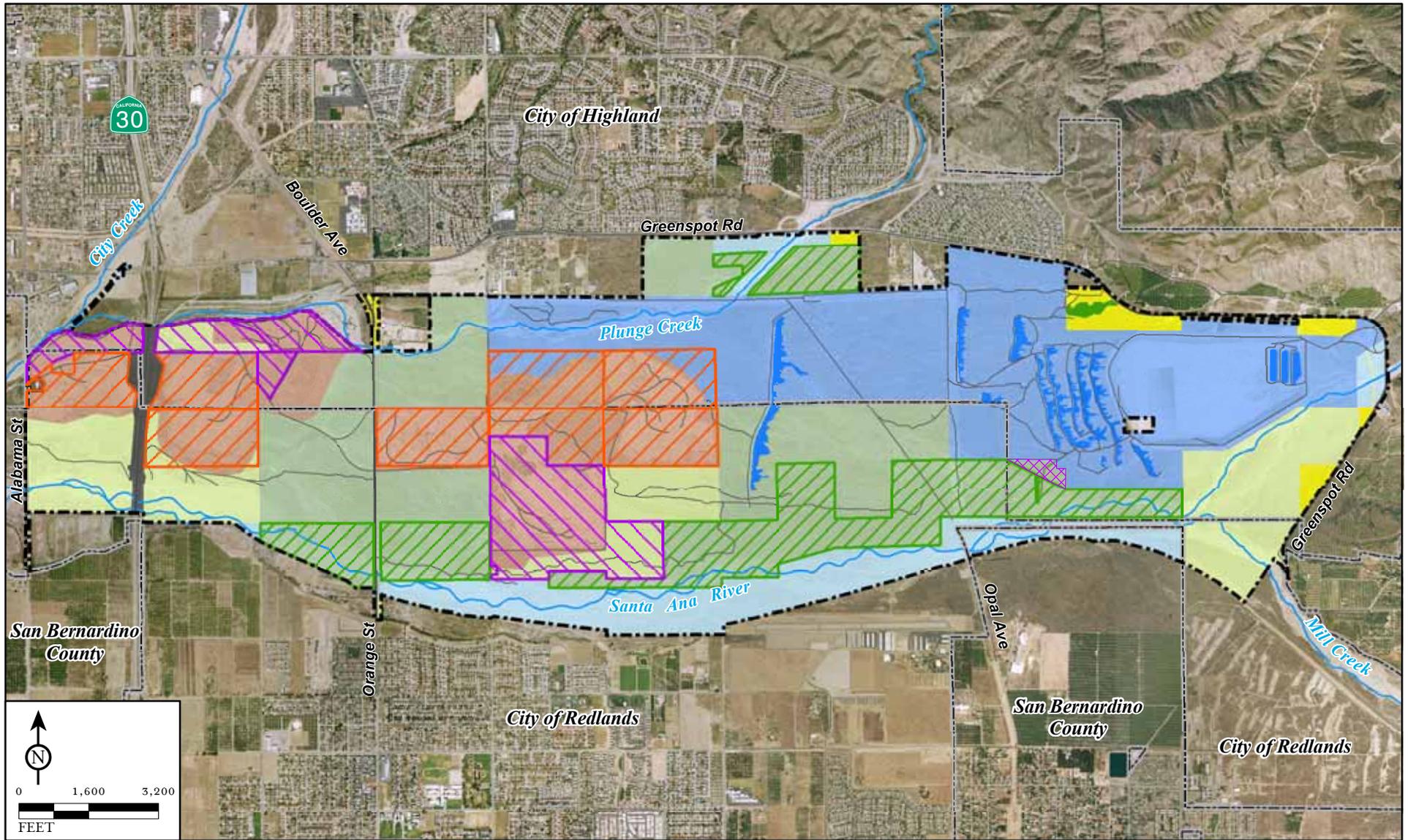
This alternative was selected for detailed analysis because it represents the Wash Plan participants' conception of the way the Planning Area would be mined absent the Project. This alternative was essentially the "Plan A" from which the Wash Plan (then called "Plan B") sprang, and allows a meaningful comparison of the Project with conditions as they were envisioned under existing leases, without the Project.

Under this alternative, some mitigation of the biological impacts associated with expanded mining, and with potential relocation of water spreading basins for water conservation, would still be needed. This mitigation would have to come from the District's dedication of remaining unmanaged habitat areas, the operators' acquisition of off-site mitigation areas, payments of mitigation fees or contribution to mitigation banks, or a combination of all of these. This is recognized as a major question in the feasibility of implementing this alternative.

- **Alternative 3: Limited Mining in Expanded Quarries Alternative**

Alternative 3 (Figure 6.3) expands the areas to be mined to the central northeast portion of the project area but would continue the existing baseline condition for aggregate production allowing 4.5 MTPY to be extracted. The Robertson's land exchange with the SBCFCD would take place as it would in the proposed project, allowing a contiguous Santa Ana River woollystar preservation area along the south of the project area. Mining activities would be allowed in the north half of Section 12 portion of the project area. The BLM land exchange with the District would not take place. Trail rights-of-way would be established in somewhat the same manner as they would in the proposed project, but the Old Rail Line Trail would be lost to mining. Mining haul and access roads would not be constructed as a part of this alternative, and this alternative would require an allocation agreement between Cemex and Robertson's as to the amounts of available tonnage to be mined by each, since Robertson's leased Cone Camp Quarry would be unavailable while Cemex's Section 12 leased area would be mined, giving disproportionate reserves to Cemex. Total tonnage would be approximately equal to the proposed project, at 184 million tons. Mining truck traffic would continue to use the existing routes on public streets. This alternative would require approval by BLM of a haul road, but would not require any Project-related amendments to the South Coast Regional Management Plan.

This project alternative was selected primarily because it decreases aesthetic impacts to the area in and around the Orange Street/Boulder Avenue right of way, which under the Project is mined out, on both sides, from the northern boundary of the Planning Area to the southern boundary, except for the existing Orange Street Plant.



LSA

PLAN BOUNDARY

JURISDICTIONAL BOUNDARY

PERMIT QUARRIES 10-25-07

CEMEX PERMITTED

ROBERTSON'S PERMITTED

WOOLLYSTAR PRESERVATION AREA

WATER CONSERVATION

FLOOD CONTROL

HABITAT CONSERVATION

UNDEVELOPED NATURAL HABITAT

AGGREGATE MINING

ROADS

STATE ROUTE 30

AGRICULTURAL

UNDESIGNATED/PUBLIC OWNERSHIP

PERCOLATION BASIN

DISTRICT CONSERVATION EASEMENT

ROADS*

RIVER OR CREEK*

*Road and stream locations digitized from 2006 aerial.

FIGURE 6.1

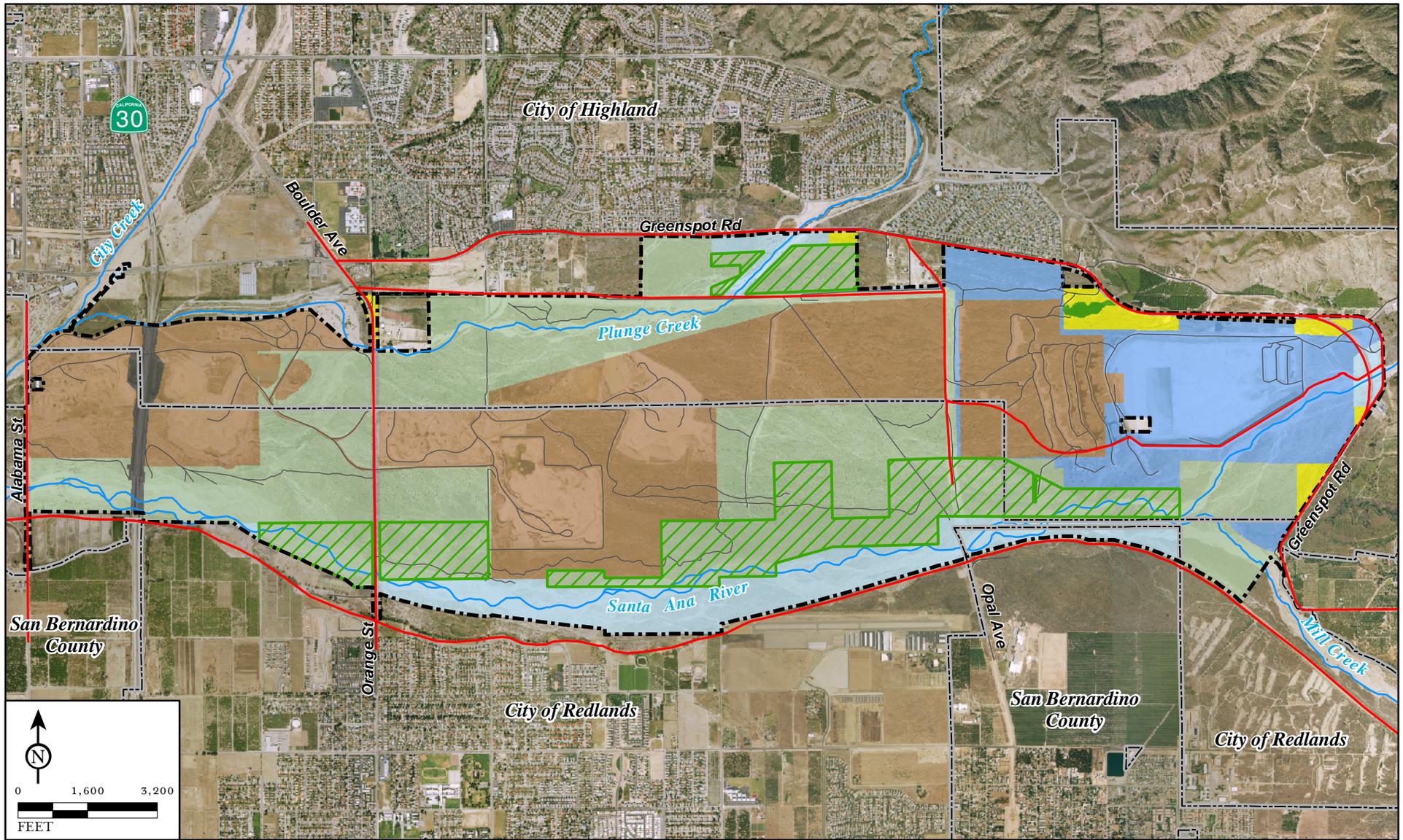
Upper Santa Ana River Wash
Land Management Plan
Environmental Impact Report

Alternative 1 - No Project
(Existing Land Uses)

SOURCES: San Bernardino Valley Water Conservation District, San Bernardino County, AirPhotoUSA, 2007

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- PLAN BOUNDARY
- JURISDICTIONAL BOUNDARY
- WOOLLYSTAR PRESERVATION AREA
- AREA NOT A PART

- AGRICULTURAL
- WATER CONSERVATION
- FLOOD CONTROL
- HABITAT CONSERVATION
- UNMANAGED OPEN SPACE
- AGGREGATE MINING
- SR-30
- ROADS
- UNDESIGNATED/PUBLIC OWNERSHIP

- FUTURE TRAILS
- ROADS*
- RIVER OR CREEK*

*Road and stream locations digitized from 2006 aerial.

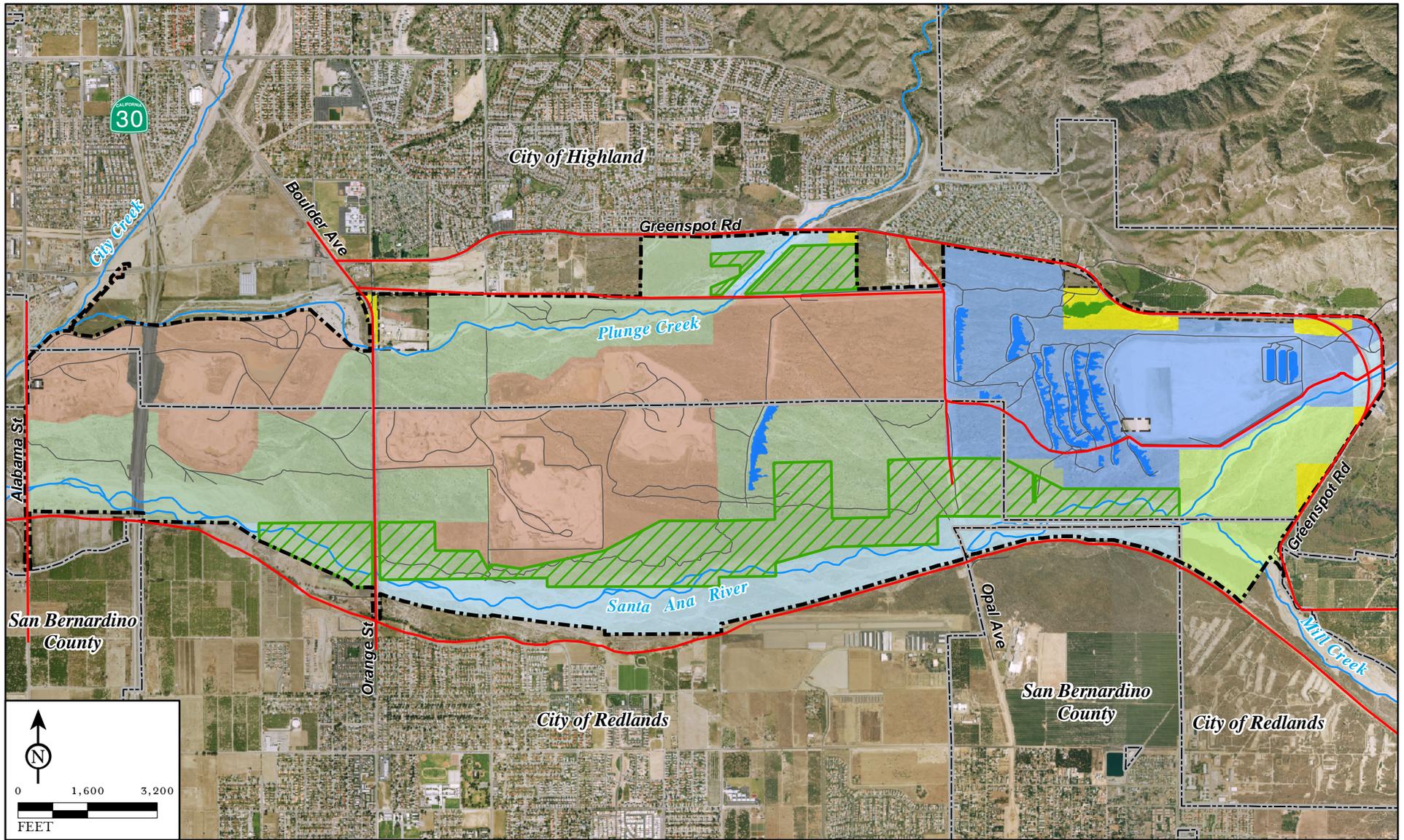
FIGURE 6.2

Upper Santa Ana River Wash
Land Management Plan
Environmental Impact Report

Alternative 2 - Proposed Land Uses

SOURCES: San Bernardino Valley Water Conservation District, San Bernardino County, AirPhotoUSA, 2007
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LSA

-  PLAN BOUNDARY
-  JURISDICTIONAL BOUNDARY
-  WOOLLYSTAR PRESERVATION AREA (PROPOSED)
-  AREA NOT A PART

-  WATER CONSERVATION
-  FLOOD CONTROL
-  HABITAT CONSERVATION
-  OPEN SPACE
-  AGGREGATE MINING
-  SR-30
-  ROADS
-  AGRICULTURAL
-  UNDESIGNATED/PUBLIC OWNERSHIP
-  PERCOLATION BASIN

-  FUTURE TRAILS
 -  ROADS*
 -  RIVER OR CREEK*
- *Road and stream locations digitized from 2006 aerial.

FIGURE 6.3

*Upper Santa Ana River Wash
Land Management Plan
Environmental Impact Report*

Alternative 3 - Proposed Land Uses

SOURCES: San Bernardino Valley Water Conservation District, San Bernardino County, AirPhotoUSA, 2007
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Alternative 4: Reduced Mining Footprint Alternative

Alternative 4 (Figure 6.4) is similar to the Project, with the exception of a 25% reduction in the geographic area of new mining to be undertaken. This alternative presumes that the area immediately south of the East Quarry North, and immediately east of the East Quarry South, would not be mined. This area, of approximately 89 acres, is roughly equivalent to 25% of the increase in mining area, totaling 363 acres, in the proposed project. The total aggregate yield expected from this alternative is 158 million tons.

Under this alternative, the 5th Street access would still be constructed, and the mining production levels would remain at 6 MTPY. The land exchanges with both the BLM and the District, and Robertson's and the SBCFCD, would both occur.

This alternative was selected because it reduces significant impacts to biological resources. As shown in Figure 3.4.4.4, this roughly 89 acre area does contain portions of Santa Ana woollystar populations, that would go undisturbed as a part of this alternative, but that are lost under the Project. In addition, this area is nearer to the Woollystar Preserve Area (WSPA), and if left unmined would provide available habitat for potential future mitigation purposes, on potential other projects in the Planning Area.

Under the Reduced Mining Footprint Alternative, short-term impacts to air quality and traffic would be expected to be similar to those of the Project, although long-term cumulative impacts may be decreased. The 6.0 MPTY production rate would make the air quality analysis for short-term impacts essentially the same as the Project, since that analysis was conducted on an annual emissions basis. Long-term, however, the reduction by approximately 25% of the mining area can be expected to result in a shortened life of the Project. As such, cumulative air quality impacts, or the time over which the annual air quality impacts would be generated, would be decreased.

With respect to traffic, the analyses for traffic were reviewed using the year 2030 as the projected future date, and the traffic impacts would be expected to extend at least until that date, even under the Reduced Mining Footprint Alternative. Again, long-term cumulative impacts, to both local streets and to freeway on- and off-ramps, would likely be reduced, due to the shortened life of the Project.

In addition, aesthetic impacts generated by the Project would be somewhat reduced by this Alternative, based on a reduction in mined area.

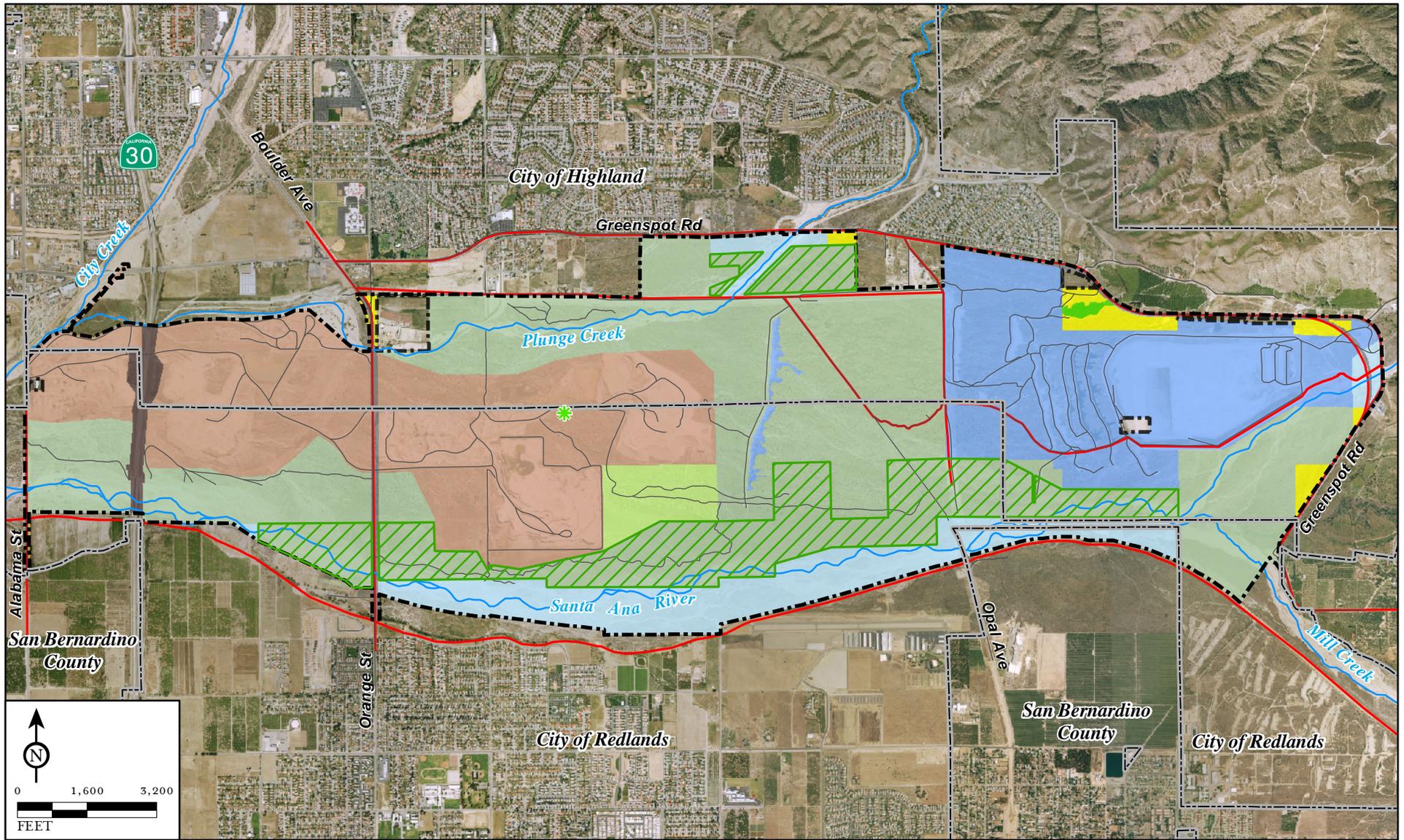
6.2.1 Methodology

The nine components of the proposed project would have varying impacts on the environment. As discussed above regarding the Project, significant impacts occur in the areas of aesthetics, air quality, biological resources, and traffic. Other impact areas assessed either have no significant impact, or have mitigation measures that reduce impacts to a level below significance.

CEQA Regulations § 15126.6 requires that alternatives chosen for analysis should be those that “. . . could feasibly accomplish most of the basic objectives of the project and could avoid or lessen one or more of the significant effects.” A discussion of how the components of the Project might vary under the differing alternatives is summarized in Tables 6.A and 6.B. A summary of how the various alternatives compare with the Project over the sixteen impact areas addressed is set out in Table 6H. This is consistent with the matrix approach suggested in CEQA Guidelines § 15126.6(d).

It should be noted that the alternatives are analyzed to compare impacts with the Project, and not as against baseline environmental conditions. The purpose of the analysis is not to generate a full EIR-level analysis of each impact, but rather to provide a fair discussion of a reasonable range of alternatives, and how they compare to the impacts generated by the Project.

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- PLAN BOUNDARY
- JURISDICTIONAL BOUNDARY
- WOOLLYSTAR PRESERVATION AREA
- Subject to the Spineflower Relocation Program

- | | |
|----------------------|-------------------------------|
| WATER CONSERVATION | STATE ROUTE 30 |
| FLOOD CONTROL | ROADS |
| HABITAT CONSERVATION | AGRICULTURAL |
| UNMANAGED OPEN SPACE | UNDESIGNATED/PUBLIC OWNERSHIP |
| AGGREGATE MINING | |

- ROADS*
 - TRAILS
 - RIVER OR CREEK*
- * Road and stream locations digitized from 2006 aerial.

FIGURE 6.4

*Upper Santa Ana River Wash
Land Management Plan
Environmental Impact Report*

SOURCES: Thomas Bros, 2001, San Bernardino Water Conservation District, Dudek, Santa Ana Watershed Project Authority, AirPhotoUSA, 2007.
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Table 6.A – Alternatives Matrix

Component	Proposed Project	Alternative 1 No Project/Existing Conditions	Alternative 2 Mining of Existing Leases	Alternative 3 Limited Mining in Expanded Quarries	Alternative 4 Reduced Mining Footprint
Water Conservation	749 740 acres: Existing activities would continue, Observation Well No. 4 would need to be relocated.	1,260 acres: Existing activities would continue, Observation Well No. 4 would not need to be relocated.	538 acres: Requires construction of new basins and canals within the area designated for water conservation, or abandonment of certain existing recharge basins, due to inability to relocate them south into WSPA Observation Well No. 4 would need to be relocated.	742 740 acres: Existing activities would continue, Observation Well No. 4 would need to be relocated.	742 740 acres: Existing activities would continue Observation Well No. 4 would need to be relocated.
Flood Control	408 406 acres: Existing activities would continue.	414 acres: Existing activities would continue.	408 406 acres: Existing activities would continue.	408 406 acres: Existing activities would continue.	408 406 acres: Existing activities would continue.
Water Production	Existing activities would continue.	Existing activities would continue.	Existing activities would continue.	Existing activities would continue.	Existing activities would continue.
Mining Operations	<p>Cemex: 3 million tons per year from Alabama Street Quarry, West Quarry, and East Quarry North.</p> <p>Robertson's: 3 million tons per year from Plunge Creek Quarry (no pit), Silt Pond Quarry, and East Quarry South.</p> <p>Total Annual Yield: 6 million tons per year</p> <p>Total Acres Dedicated to Mining: 1,195 acres</p> <p>Total Tonnage: 184 Million Tons</p>	<p>Cemex: 2.5 million tons per year from Alabama Street Northwest, Northeast, and Southeast, Johnson Pit North and South, Redlands Aggregate North and South, Orange Street Plant.</p> <p>Robertson's: 2 million tons per year from Old Webster Pit, continuation of a processing plant, a ready mix plant, and a silt pond.</p> <p>All existing permitted land would be mined.</p> <p>Total Annual Yield: 4.5 million tons per year</p> <p>Total Acres Dedicated to Mining: 832 acres</p> <p>Total Tonnage: 43 Million Tons</p>	<p>Mining expands to the northeast in the Planning Area to include the New Orange Street Quarry and the Cone Camp Quarry.</p> <p>Cemex: 3 million tons per year from New Orange Street Quarry, Redlands Aggregate North, Johnson Pit North, Redlands Aggregate Pit South, Johnson Pit South Alabama Street East, and West.</p> <p>Robertson's: 3 million tons per year from Cone Camp Quarry, Old Webster Pit and East and West Basin Plunge Creek.</p> <p>Total Annual Yield: 6 million tons per year</p> <p>Total Acres Dedicated to Mining: 1,580 acres</p> <p>Total Tonnage: 220 Million Tons</p>	<p>Mining expands to the northeast to include the New Orange Street Quarry.</p> <p>Cemex: 2.5 million tons per year from Alabama Street Quarry, West Quarry, New Orange Street Quarry and East Quarry North.</p> <p>Robertson's: 2 million tons per year from Plunge Creek (no pit) Quarry, Silt Pond Quarry, and East Quarry South</p> <p>Total Annual Yield: 4.5 million tons per year.</p> <p>Total Acres Dedicated to Mining: 1,309 acres</p> <p>Total Tonnage: 184 Million Tons</p>	<p>Mining similar to project, except reduced by some 25%, at southeast portion of project's proposed new mining area. Would require allocating agreement among miners for remaining available aggregate..</p> <p>Total Annual Yield: 6.0 million tons per year</p> <p>Total Acres Dedicated to Mining: 1,106 acres</p> <p>Total Tonnage: 158 Million Tons</p>
Adoption of General Plan Amendments	General Plan Amendments to amend trail rights-of-way and land use in each jurisdiction's General Plan would occur. BLM to amend SCRMP to include ACEC areas.	General Plan Amendments related to additional trail right-of-way designations and amendments to land use would not occur.	No SCRMP amendment for project-related features. Reduced need for general plan amendments because reduced trails.	No SCRMP amendment for project-related features. Reduced need for general plan amendments because reduced trails	Similar to the proposed project
Roadways	Biological clearance for dedication <u>designation</u> of additional rights-of-way for subsequent improvements to Greenspot Road and the Greenspot Road Bridge, and Alabama Street and Orange Street. New mining haul road and new 5 th Street access road.	The public road rights-of-way would not be established under the No Project Alternative nor would biological mitigation be implemented for any resulting biological impacts; however, the City of Highland and City of Redlands would likely pursue those rights-of-way as separate actions, which would require separate environmental clearances hinder construction of those improvements and impact public safety.	Includes new haul road and 5th Street access to remove highway trucks off of City streets. biological clearance for public roadway or bridge improvements would be included.	Biological clearance for additional rights-of-way for subsequent improvements to Greenspot Road and the Greenspot Road Bridge, and Alabama Street and Orange Street/Boulder Avenue.	Biological clearance additional rights-of-way for subsequent improvements to Greenspot Road and the Greenspot Road Bridge, and Alabama Street and Orange Street./Boulder Avenue.
	Total Acres Dedicated to Roadways: 96-113 acres	Total Acres Dedicated to Roadways: 66 acres	Total Acres Dedicated to Roadways: 96-113 acres	Total Acres Dedicated to Roadways: 96-113 acres	Total Acres Dedicated to Roadways: 96-113 acres

Table 6.A – Alternatives Matrix

Component	Proposed Project	Alternative 1 No Project/Existing Conditions	Alternative 2 Mining of Existing Leases	Alternative 3 Limited Mining in Expanded Quarries	Alternative 4 Reduced Mining Footprint
Trails	Dedication Designation of additional trail rights-of-way: bicycle lanes on Alabama Street, Orange Street, and Greenspot Road; dedicated bikeways on Old Greenspot Road; three unpaved multi use trails on Pole Line Road, Old Rail Line, and Cone Camp Road; and one paved multi-use trail at borrow pit south rim. Possible recreational use of quarries at closure.	No trail improvements.	Modified trail locations including loss of Old Rail Line Trail and Cone Camp Road Trail, including the connector to the Borrow Pit South Rim Trail.	Loss of Old Rail Line Trail.	Similar to the proposed project
Land Exchange	BLM and District exchange parcels. Amendment by BLM to Resource Management Plan noting new ACEC parcels. SBCFCD and Robertson's exchange land resulting in larger Santa Ana River Woollystar Preservation area.	No Land Exchanges. No Amendment to Resource Management Plan for any Project-related feature. No additional lands set aside and managed for habitat conservation.	No Land Exchange; BLM would have to approve haul road on BLM-managed ACEC land. No land exchange between SBCFCD and Robertson's.	No BLM Land Exchange; BLM would have to approve haul road on BLM-managed ACEC land. SBCFCD and Robertson's exchange land resulting in larger Santa Ana River Woollystar Preservation area.	Similar to proposed Project.
Habitat Conservation	Santa Ana River Woollystar Preservation Area after land exchange with Robertson's (574 acres). BLM ACEC (674 acres). Habitat Conservation and Potential ACEC Land (673 acres). Conservation easement (10 acres). City of Highland biological mitigation (46-20 acres). Total Habitat Conservation Area: 1,947 acres	No additional lands set aside and managed for habitat conservation. Total Habitat Conservation Area: 1,215 acres	Unknown extent of managed habitat dedication required. Total Habitat Conservation Area: 1,773 acres	Expanded WSPA from Robertson's/SBCFCD exchange, remaining managed habitat area unknown. Potential additional 170 acres of habitat from conversion of water conservation area to habitat. Total Habitat Conservation Area: 1,610 acres	Similar to proposed project. Total Habitat Conservation Area: 1,947 acres

Table 6.B – Land Uses for Alternatives

Land Use	Proposed Project (acres)	No Project/Existing Land Uses (acres)	Alternative 2 Land Uses (acres)	Alternative 3 Land Uses (acres)	Alternative 4 Land Uses (acres)
Water Conservation	749-740	1,260	538	749-740	749-740
Flood Control	408-406	414	408-406	408-406	408-406
Habitat Conservation	1,947	1,215	1,773	1,610	1,947
Unmanaged Open Space	0	604	0	230	89
Aggregate Mining and Processing	1,195	832	1,580	1,309	1,106
Arterial Roads/ Highways	96-113	66	96-113	96-113	96-113
Agriculture	6	6	6	6	6
Undesignated Public Ownership	66-60	70	66-60	66-60	66-60
Planning Area	4,467	4,467	4,467	4,467	4,467
Area Not a Part	52	52	52	52	52
Area within Project Boundary	4,519	4,519	4,519	4,519	4,519

As can be seen from the discussion and matrix presentation that follows, the environmentally superior alternative is the No Project alternative. This alternative is the most restrictive in terms of mining, presuming no expansion of mining activity outside of dwindling existing permitted reserves. Since the aggregate mining is the component that generates the most environmental impact, it stands to reason the alternative that most limits this activity is the one that is environmentally superior.

CEQA Guidelines § 15126.6(e)(2) also requires that when the “no project” alternative is superior, the EIR shall also identify an environmentally superior alternative among the other alternatives. Here, that environmentally superior “other alternative” is Alternative 4, as discussed in Section 6.4 below.

6.2.2 Environmental Impact Issues That Are Generally Similar to the Proposed Project

Nine of the sixteen environmental issues for all the alternatives considered would result in a similar level of impact when compared to the project:

- Agricultural Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Population and Housing
- Utilities and Public Services
- Recreation and Parks

With the four alternatives, impacts associated nine of the environmental impact areas would be similar to the proposed project. The level of impact associated with these topics would be the similar if developed as proposed by the project or if developed with any of the alternatives. Where impacts related to any of these nine issues do differ among project alternatives, an appropriate discussion is provided for the respective alternative.

Agricultural Resources. Development of any of the alternatives would generally have similar agricultural-related impacts. Because Prime Farmland and existing agricultural operations within the project area would not be affected by the project and the alternatives, the conversion of designated farmland to urban uses would not occur. Compared to the proposed project, no greater impact would occur for any of the project alternatives.

Cultural Resources. Development of any of the identified alternatives would result in extensive ground-disturbing activities affecting the areas where aggregate mining would occur. Therefore, similar archaeological and paleontological impacts would be anticipated when compared to the proposed project. While resources have previously been detected within the project limits, activities undertaken for all alternatives (as with the proposed project) could encounter previously undetected cultural or paleontological resources. Adherence to the archaeological and paleontological measures identified for the proposed project in the EIR would similarly reduce impacts to less than significant. Compared to the proposed project, no greater impact would occur with any of the alternatives. A discussion of potential cultural resource impacts of the relocation of aggregate mining activities and the relocation of water conservation facilities is provided separately for Alternative 2 below.

Geology and Soils. Development of any of the alternatives would have similar geologic and soil-related impacts. The activities associated with aggregate mining would be required to adhere to recommendations that address potential impacts related to the stability of soils. Adherence to the recommendations included in any such investigation, as well as compliance with City standards, would ensure that geotechnical impacts would be reduced to a less than significant level. Compared to the proposed project, no greater impact would occur with any of the project alternatives.

Hazards and Hazardous Materials. Development with the alternatives would result in the handling of hazardous substances, during the operation and reclamation phases for the aggregate mining. These substances would continue to be used in accordance with applicable local, State, and Federal standards. Impacts resulting from the transport or use of hazardous materials or potential upsets or accidents during the occurrence of these activities would be similar to those identified with the proposed project. As with the proposed project, these alternatives would not result in the development of uses within portions of any airport influence zone and would not generate impacts related to airport land use compatibility and safety. Compared to the proposed project, no greater impact would occur with any of the alternatives.

Hydrology and Water Quality. The expansion of aggregate mining into new areas within the project boundaries would require substantial alteration of the existing drainage pattern. However, because the extent of the alteration of drainage patterns required for these alternatives would be similar to that required for the proposed project, the impacts associated with these improvements would be similar. All local, State, and Federal policies and regulations pertaining to surface water and groundwater resources would remain in effect with these alternatives. When compared to the proposed project, impacts related to hydrology and water quality would be similar with these alternatives.

Land Use and Planning. Similar to the proposed project, the alternatives would generally comply with applicable provisions of local and regional plans (e.g., Highland General Plan, Redlands General Plan, and the South Coast Resource Management Plan.). Land use impacts associated with these alternatives would be similar when compared to the proposed project. A discussion of potential land use and planning impacts of the relocation of aggregate mining activities and the relocation of water conservation facilities is provided separately for Alternative 2 below.

Population and Housing. In the absence of any significant population increase attributable to the proposed project or alternatives, no increase in population and housing would occur. Compared to the proposed project, no greater impact would occur under any of the project alternatives.

Utilities and Public Services. In the absence of any significant population increase attributable to the proposed project or alternatives, no increase in the demand for public services or facilities resulting in a physical impact to the environment would occur. Compared to the proposed project, no greater impact would occur under any of the project alternatives.

Recreation and Parks. Though the alternatives do vary in the creation of additional recreational trails, none create any significant population increase such that no increase in the demand for recreation services or facilities resulting in a physical impact to the environment would occur. However, the loss of recreational trails in some of the Alternatives would create a somewhat greater impact than would occur with the proposed project.

6.2.3 Description and Impact Analysis of Alternatives

The following discussion compares the impacts of each alternative with the impacts of the proposed project, as detailed in Section 4.0 of this EIR. A conclusion is provided as to whether each alternative would result in one of the following:

- Reduction or elimination of the impact;
- A greater impact than the project;
- The same impact as the project; or

- A new impact in addition to the impacts of the proposed project impacts.

6.2.3.1 Impact Analysis of Alternatives

Alternative 1: No Project Alternative

The purpose of describing and analyzing a No Project Alternative is to provide decision-makers a comparison of the impacts of approving the proposed project versus the impacts of not approving the proposed project. Under CEQA (Section 15126.6[e][2]), the No Project discussion should consider what is reasonably expected to occur in the foreseeable future if the project were not approved based on current plans and consistent with available infrastructure and community services. Under the No Project Alternative (Figure 6.1), the rate of mining operations could increase to 7.4 MTPY based on current mining permits, but historical practice indicates that production stayed closer to 4.5 MTPY, and that is the production rate presumed for the “No Project” alternative here.

Due to limited availability of aggregate resources within existing quarries on site, resource extraction would cease once the permitted quarries are completely mined. Existing water conservation activities, flood control activities, and water production activities in the project area would continue to occur. Habitat conservation would remain the same under the No Project Alternative and would consist of the 547-acre Santa Ana River Woollystar Preservation Area and approximately 668 acres of habitat conservation and undeveloped natural habitat. Under this alternative, the adoption of General Plan Amendments, additional ~~dedication~~ designation of roadway and recreational trail rights-of-way, and the two land exchanges (one between the District and BLM and one between the SBCFCD and Robertson’s) would not occur. Under the No Project Alternative, it is anticipated that if these actions do occur, such actions would occur independently of one another.

Five environmental issues under this alternative would have similar impacts as the proposed project. These include the following:

- Agricultural Resources
- Population and Housing
- Recreation and Parks
- Geology and Soils
- Utilities and Public Services

A discussion of these issue areas was provided in Section 6.2.2 and is not repeated. The remaining environmental issues would, in some cases, result in similar impacts, but would be different enough to be discussed separately.

Aesthetics. As part of the proposed project, aggregate mining would be expanded into new areas, mining pits would be deepened in some areas, and yearly aggregate production would increase to 6 million tons per year. No mining expansion would occur with the No Project Alternative; instead, the areas that are designated for aggregate mining could be mined up to the permitted rate of 7.4 million tons per year until the resource is depleted, but are more likely to be mined at a rate of 4.5 MTPY. Without the expansion of the mining areas, the visual impacts created by the mining pits would remain essentially the same as the current conditions. The No Project Alternative would result in a reduction in aesthetic impacts compared to those created by the proposed project.

Under the No Project Alternative, existing water conservation activities would continue and the relocation of Observation Well No. 4 would not occur. When compared to the proposed project, aesthetic impacts associated with water conservation activities would be reduced since existing baseline conditions for water conservation activities would continue.

Air Quality. The project as proposed would have potentially significant impacts to air quality, which cannot be mitigated below a level of significance. The No Project Alternative presumes aggregate mining activities to continue to operate as they currently exist with a permitted production rate of 4.5

MTPY. These existing aggregate mining activities would generate emissions in quantities less than the proposed project. Impacts related to air quality from the implementation of the No Project Alternative would be less than the proposed project.

The No Project Alternative would allow present water conservation activities within the project site to continue as currently existing; therefore, no new impacts would result. Implementation of the No Project Alternative would reduce water conservation-related impacts associated with air quality in comparison to the proposed project.

Biological Resources. With the No Project Alternative, existing aggregate mining activities would continue. The land exchanges between the District and the BLM and between Robertson’s and the SBCFCD would not take place. The proposed addition of 732 acres to habitat conservation lands, management of the planned 1,947 acres under an approved Habitat Conservation Plan through the USFWS, and land exchanges under the proposed project would provide environmental benefits to biological resources through the preservation, consolidation and active management of habitat areas. These environmental benefits would not take place with the No Project Alternative.

Slender-horned spineflower, Santa Ana River woollystar, and San Bernardino kangaroo rat habitat includes alluvial fan sage scrub vegetation types while the coastal California gnatcatcher and Los Angeles pocket mouse habitat includes alluvial fan sage scrub and upland sage scrub vegetation types. Consequently, impacts to these species have been assessed based on the total acreage of alluvial fan sage scrub and upland sage scrub that would be affected by each alternative. As shown in Table 6.C, as many as 199 acres of alluvial fan and upland sage scrub are contained within existing mining permitted areas. None of these acres would be disturbed under the No Project Alternative, which presumes no additional biological clearances would be obtained, even for areas currently included in mining permits. This compares with 546 acres of disturbance that would occur as a part of the proposed project aggregate mining expansion.

Table 6.C – Vegetation Type within Alternative 1 (No Project/Existing Mining Area)

Vegetation Type	Acreage
Developed/ Ruderal	628
Non-Native Grassland (NNG)	5
Riversidean Alluvial Fan Sage Scrub: Intermediate	109
Riversidean Alluvial Fan Sage Scrub: Intermediate/Mature	72
Riversidean Alluvial Fan Sage Scrub: Mature	1
Riversidean Upland Sage Scrub	17
Total	832

With the No Project Alternative, the consolidation and preservation of habitat areas would not occur resulting in the continued piecemeal review and patchwork of mitigation areas and efforts conducted on an individual basis for projects that would occur within the Planning Area. When compared to the proposed project, the No Project Alternative would continue baseline conditions for existing biological resources which would not create the significant unavoidable impacts that are associated with the proposed project. However, under the No Project Alternative, the benefit to biological resources resulting from a coordinated mitigation program as identified under the proposed project would not.

Under the No Project Alternative, existing water conservation activities would continue and the relocation of Observation Well No. 4 would not occur. When compared to the proposed project, biological resource impacts associated with water conservation activities would be reduced since existing baseline conditions for water conservation activities would continue.

Cultural Resources. There is little potential for cultural resource impacts to occur with the No Project Alternative. Under the No Project Alternative, aggregate mining would continue in the areas designated for existing mining. Impacts to cultural resources under the No Project Alternative would be reduced when compared to the proposed project because the area of new mining would be correspondingly reduced.

The No Project Alternative would allow present water conservation activities within the project site to continue as currently existing; therefore, no new impacts would result. Implementation of the No Project Alternative would reduce water conservation impacts associated with cultural resources in comparison to the proposed project.

Hazards and Hazardous Materials. The No Project Alternative would allow present activities within the Planning Area site to continue as currently existing; therefore, no new impacts would result. Implementation of the No Project Alternative would reduce impacts associated with hazards and hazardous materials in comparison with the proposed project, due to the reduction in areas that would be mined.

Under the No Project Alternative, existing water conservation activities would continue and the relocation of Observation Well No. 4 would not occur. When compared to the proposed project, hazards and hazardous materials impacts associated with water conservation activities would be reduced, since existing baseline conditions for water conservation activities would continue.

Hydrology and Water Quality. No new activities would take place as a result of the No Project Alternative. As a part of the proposed project, the expansion of mining areas could have an impact on water quality. Mitigation measures are included in Section 4.8 to reduce these impacts to a less than significant level. Since the expansion of mining activities would not occur as part of the No Project Alternative, the impacts associated with these activities would not occur and the impacts associated with this alternative would be reduced in comparison to the proposed project.

The No Project Alternative would allow present water conservation activities within the Planning Area to continue as currently existing; therefore, no new impacts would result. Implementation of the No Project Alternative would reduce water conservation impacts associated with hydrology and water quality in comparison to the proposed project.

Land Use and Planning. The No Project Alternative would not change any of the existing conditions and therefore would not have any impacts in relation to land use and planning. The No Project alternative would have reduced impacts on Land Use and Planning, as compared to the Project.

Mineral Resources. Significant impacts to mineral resources would result from the implementation of the proposed project. Aggregate mining areas would be expanded and the mineral resources would be extracted at a rate of 6.0 million tons per year as a part of the proposed project, but MRZ-2 reserves would still be lost to other uses. The No Project Alternative would restrict the mining activities within the project area to the occurring only within the areas currently dedicated for mining activities. Impacts to mineral resources would be greater in comparison to the proposed project with this alternative because aggregate extraction into the new areas would not occur.

Noise. Under the proposed project, noise impacts would be less than significant as the distance from mining activities to sensitive noise receptors is sufficient to result in a reduction in noise levels to within local noise standards. The proposed internal haul and access roads will remove the majority of trucks from Orange Street north of the Cemex plant and from 5th Street between Orange Street-Boulder Avenue and SR-30, reducing the truck noise along this developing commercial corridor.

Noise generated by mining activities and related truck traffic under the No Project Alternative could be greater than the proposed project and would continue to use the existing truck routes. The No Project Alternative could result in higher levels of traffic noise in comparison to the proposed project.

Recreation and Parks. The No Project alternative does not include any of the trails associated with the proposed project. As such, the recreational opportunities afforded by the project are reduced under the No Project alternative, which results in a somewhat greater impact as compared with the proposed project.

Transportation. The proposed project would increase the mining area and establish a limit of production to 6 MTPY, resulting in an increase over baseline in number of total truck trips per day. The proposed internal haul and access road would remove the majority of trucks related to mining activities from Orange Street-Boulder Avenue north of the Cemex plant and from 5th Street between Orange Street-Boulder Avenue and SR-30, reducing the truck traffic for the affected intersections and along this developing commercial corridor in the City of Highland. Traffic impacts of the proposed project are significant and unavoidable (freeway lanes) and mitigation in the form of direct road improvements and mitigation/development impact fees are required. Since there could be additional traffic along Orange Street-Boulder Avenue and 5th Street with no required roadway improvements, the No Project Alternative would result in an increase in impacts in comparison to the proposed project.

Utilities and Service Systems. The proposed project has impacts that are considered less than significant related to the relocation of existing water well within the project area. Mitigation measures are proposed to reduce the impacts associated with the well relocation. The proposed project's impacts associated with the other thresholds related to utilities and service systems discussed in Section 4.16 would be less than significant and would not require mitigation. The No Project Alternative would not include the demolition or relocation of the well and would not propose any changes to the utilities and service systems within the project area. Impacts from the No Project Alternative would be reduced in comparison to the proposed project.

Conclusion. With the No Project Alternative, the project area would continue to operate as it does now. The beneficial actions of the land transfers and the additional lands for habitat conservation in order to consolidate and preserve habitat, and the management of said lands under the HCP would not occur as part of the No Project Alternative. Direct impacts associated with the destruction of existing habitat would not occur since the areas proposed for mining would not be mined. The proposed project would have a significant unavoidable impact on transportation and traffic, but in terms of traffic on local streets, to a lesser degree than the No Project Alternative. The proposed project would increase the areas to be mined, and though it would limit production to 6 MTPY, it will still result in a greater in a number of total daily truck trips on local roads, compared to existing baseline. In addition, the internal haul and access roads proposed as part of the project would reduce the number of trucks on local roads and impacts to local intersections. The No Project alternative therefore foregoes the local traffic improvements afforded by the Project, and has incrementally greater traffic impact.

As part of the No project Alternative there would be no trails and therefore no recreational benefits, no mitigation for road and bridge rights-of-way affecting public safety, no potential future additional water recharge areas affecting water supply, no additional habitat lands and habitat management affecting sensitive species, and no land exchanges of lesser or impacted BLM lands for better quality and undisturbed habitat.

Alternative 2: Mining of Existing Lease Areas Alternative

This alternative was selected to simulate the full mining of existing leased areas as contemplated under the “before project” conditions. It eliminates the need for land exchanges; and permits a greater recovery of the aggregate resources. In this alternative, the new mining operations covering a total area of 1,580 acres would be located in the northern section of the Planning Area. The maximum aggregate materials mined and extracted would remain the same as with the proposed project (6 million tons per year). The 5th Street access improvements would be built, and the biological clearance for the additional road rights of way, and trails, along Alabama, Greenspot, and Orange St./Boulder Ave. would remain.

A habitat preservation area, which would be a combination of lands from City of Highland Biological Mitigation (46 20 acres), a conservation easement (10 acres), District Habitat Preserve (229 acres) and open space (971 acres) covering a total area of 1,226 acres would be located in the north central section of the Planning Area. The Santa Ana River Woollystar Preservation Area would be retained in its current location. The flood control area, spanning approximately 408 acres, would remain the same as the proposed project. Under this alternative, the existing water basins of the District would be impacted by the mining expansion proposed in this alternative. These basins would be relocated and reconstructed within the existing Borrow Pit areas of the Planning Area, or abandoned, because they cannot be located to the south, which is WSPA preserve area. A landscape buffer to screen views of mining operations adjacent to State Route 30 would be completed as part of this alternative. Figure 6.2 shows the Alternative 2 land use pattern.

Six environmental issues under this alternative would have similar impacts as for the proposed project. These include the following:

- Agricultural Resources
- Hazards and Hazardous Materials
- Utilities and Public Services
- Geology and Soils
- Population and Housing
- Recreation and Parks

A discussion of these issue areas was provided in Section 6.2.2 and is not repeated. The remaining environmental issues would, in some cases, result in similar impacts, but would be different enough to be discussed separately.

Aesthetics. The Mining of Existing Lease Areas Alternative would result in expansion of aggregate mining in new locations within the project area different from what is analyzed for the proposed project. Aggregate mining activities would be moved and expanded further east with the expansion of the mining into the Cone Camp Quarry in Section 7, and the north half of Section 12. This would disturb the existing viewscape of these areas, resulting in a greater aesthetic impact.

Similar to the proposed project, the relocation of the water conservation basins, if placed within the Borrow Pit, would be consistent with the visual character of existing basins already located there. This aspect of Alternative 2 is therefore not expected to result in any aesthetic impacts different from the Project. Due to the close proximity of existing water conservation basins to the area where the any new water conservation basins would be located, impacts to scenic resources and scenic vistas would be similar. No significant visual resource has been identified within the limits of the alternate project site. Since the view sheds have already been impacted by the existing water conservation activities to the north, changes to the visual character of the project site with implementation of Alternative 2 would be similar to the proposed project.

Air Quality. The total amount of aggregate yield under this alternative would higher than the total amount of aggregate yield identified in the proposed project. The areas to be mined as a part of this alternative are expanded, and located farther to the east from the aggregate processing areas. As a

result, mining vehicles would be required to drive longer distances on unpaved roads, increasing the amount of dust generated and emissions from mining vehicles. When this alternative is compared to the proposed project, impacts to air quality would be increased compared to those identified for the proposed project.

Biological Resources. The Mining of Existing Lease Areas Alternative would require soil disturbance for aggregate mining activities greater than would be required for the proposed project. Biological communities present at the area for these expanded aggregate mining activities would be relatively similar to biological communities present at the proposed project location, but more would be disturbed. The planning effort for the proposed project selected those lands considered suitable remaining blocks of undisturbed habitat that support listed and sensitive species, which included the Alternative 2 area in the north half of Section 12. Locating mining in the north half of Section 12 and Section 7 essentially expands mining over 2 miles to the east into relatively large tracts of undisturbed land. Wildlife connectivity and corridors between the San Bernardino Mountains and the Santa Ana River would be blocked. The mining activities and truck movement or conveyor system would add noise, dust, and light impacts that could affect wildlife in the eastern portions of the Wash area.

Slender-horned spineflower, Santa Ana River woollystar, and San Bernardino kangaroo rat habitat includes alluvial fan sage scrub vegetation types while the coastal California gnatcatcher and Los Angeles pocket mouse habitat includes alluvial fan sage scrub and upland sage scrub vegetation types. Consequently, impacts to these species have been assessed based on the total acreage of alluvial fan sage scrub and upland sage scrub that would be affected by each alternative. As shown in Table 6.D, the Alternative 2 would impact 759 acres of alluvial fan and upland sage scrub compared to 546 acres of disturbance that would occur as a part of the proposed project aggregate mining expansion.

Table 6.D – Vegetation Type within Alternative 2 Mining Area

Vegetation Type	Alt 2 Acres	Existing Acres	Additionally Impacted Acres
Chemise Chaparral	101	0	11
Chamise Chaparral/ Non-Native Grassland (NNG)	2	0	2
Developed/ Ruderal	625	628	-3
NNG	30	5	25
Recharge Basin	63	0	63
Riversidean Alluvial Fan Sage Scrub - Intermediate	195	109	86
Riversidean Alluvial Fan Sage Scrub - Intermediate/ Mature	377	72	305
Riversidean Alluvial Fan Sage Scrub - Mature	164	1	163
Riversidean Alluvial Fan Sage Scrub - Mature/ NNG	1	0	1
Riversidean Alluvial Fan Sage Scrub - Pioneer	0	0	0
Riversidean Upland Sage Scrub	22	17	5
Total	1,580	832	748

This alternative would not consolidate habitat through the land exchanges and additional lands planned for habitat conservation. No management of the habitat lands throughout the Wash would occur and no overall HCP would be prepared. Like the proposed project significant unavoidable biological impacts would occur under this Alternative, though they would be exacerbated under this alternative.

Impacts to biological resources resulting from development of this alternative would be greater than the proposed project.

Under this alternative, water conservation basins would have to be reconstructed and relocated within areas of the project that are designated for water conservation, or abandoned. If replaced, the water conservation basins would have to be constructed in the Seven Oaks Dam Borrow Pit. As shown in Figure 3.4, there are isolated occurrences of certain sensitive species within this area. Therefore, the relocation of the water conservation basins would potentially result in impact to additional biological communities. Similar to the aggregate mining activities, the relocation of water conservation basins would result in potential impacts to sensitive species. Therefore, the water conservation component under Alternative 2 could result in greater impacts to biological resources than what was concluded for the proposed project.

Cultural Resources. Implementation of Alternative 2 would require soil disturbance for aggregate mining activities in the same manner as would be required for the proposed project. Cultural resources present in areas where the relocation of aggregate mining would occur would likely have a similar occurrence rate as that identified for the proposed project site. While the presence of cultural resources in these areas cannot be confirmed without a cultural survey, impacts are anticipated to be similar to the proposed project. However, if cultural resources are present in areas identified for the relocation of mining activities, impacts to cultural resources resulting from these activities under this alternative would be greater than the proposed project. As required for the proposed project, mitigation to address potential impacts to cultural resources would also be required. Because of the expanded possibility of impacts to cultural resources, the aggregate mining component of Alternative 2 would result in greater impacts to cultural resources than what was concluded for the proposed project.

Hydrology and Water Quality. Implementation of the Expanded Mining/Reduced Water Conservation and Habitat Alternative would relocate aggregate mining activities in a different area within the project site. All local, State, and Federal policies and regulations pertaining to surface water and groundwater resources would remain in effect under this alternative for the aggregate mining component. Similar to the proposed project, the new mining areas would be required to follow applicable NPDES requirements, including the revision and adherence to SWPPP BMPs. However, because the relocation of aggregate mining would occur within a different area of the project, the impacts associated with drainage patterns under Alternative 2 may be greater than what was identified for the proposed project. It is unknown if drainage patterns would be altered in such a way as to impact other resources within the project area.

Under this alternative, water conservation basins would have to be reconstructed and relocated within the Borrow Pit, or abandoned. The District is presently studying the effectiveness and feasibility of the use of the Borrow Pit for groundwater recharge, and the long-term feasibility of such basins will become clearer after that study. If the basins cannot be placed there, or will not work there, they would likely be lost under this alternative, since they cannot be placed with the WSPA area to the south, which is closed to such disturbances. Mining would take place in areas that are designated for water conservation under the proposed project, which would significantly limit the areas available for groundwater recharge. If the existing groundwater basins could not be replaced, impacts to groundwater recharge could therefore be greater than the proposed projects and all of the other alternatives.

Land Use and Planning. Implementation of this alternative would not require an amendment to the BLM South Coast Resource Management Plan, nor require any of the administrative processes or legislation required to complete a land exchange between BLM and the District. Moreover, the designation under the applicable general plans for the Cities of Redlands and Highland are consistent with mineral activities on the existing lease areas. The elimination of many of the recreational trails proposed by the Project under this alternative would reduce the need for general plan amendments. This alternative therefore results in less Land Use and Planning impacts than the proposed Project.

Mineral Resources. The total amount of aggregate yield under Alternative 2 would be greater than the total amount of aggregate yield identified in the proposed project. The total of 1,580 acres of mining exceeds the Project's 1,195 acres, and would result in a proportionate reduction in the long-term loss of available aggregate reserves in the MRZ-2 resource area.

Under this alternative, water conservation basins would be reconstructed and relocated within portions of the project that are designated for water conservation. If they are replaced, the construction of water conservation basins would not reduce the availability of mineral resources or the resource base from which they are derived. Like the proposed project, the area in which the construction would take place is designated as an area where no mineral extraction would occur.

Noise. Under Alternative 2, the relocation of aggregate mining would situate mining activities closer to existing sensitive receptors. Because of the expanded scope of mining, the operational noise levels would be greater for the aggregate mining component under this alternative as compared to the proposed project.

The relocation of water conservation basins would temporarily increase noise levels in the vicinity. However, once construction has completed, noise associated with construction of the water conservation basins would cease. Operational noise levels would be similar to the proposed project, as the only noise that would be generated from water conservation activities would be those associated with operation/maintenance of existing facilities. Therefore, temporary noise impacts would be greater as construction of water basins could occur under Alternative 2. Operational noise impacts would be similar to operational activities associated with the water conservation component identified for the proposed project.

Recreation and Parks. Alternative 2 expands mining into areas the project proposes for recreational trails. The Old Rail Line Trail, as well as the Cone Camp Trail, would be lost, as would any connection between the Cone Camp Trail and the Borrow Pit South Rim Trail. In this respect, the recreational opportunities afforded by Alternative 2 are somewhat reduced from those offered by the proposed project, which results in a somewhat greater impact as compared with the proposed project.

Transportation. The number of daily vehicle trips generated associated with aggregate mining under Alternative 2 increase in comparison with the proposed project, because the expanded mining would result in expanded truck trips. Alternative 2 truck traffic would use the proposed new 5th Street access, however, such that impacts found to be mitigated from the project on local surface streets would be equivalently mitigated under this alternative. Because this alternative presumes a 6.0 MTPY production rate, the proposed internal haul and access road, which will remove the majority of trucks from local streets, would be constructed as a part of Alternative 2. In addition, biological clearance for the road and bridge rights-of-way would be established. Impacts to freeway on- and off-ramps, found to be significant and unavoidable with the project, would continue with this alternative, and be proportionately greater with the increase in truck traffic caused by additional mining acreage being put in production. This would exacerbate a significant unavoidable impact. Therefore, traffic impacts under Alternative 2 are expected to be greater than the proposed project.

Under this alternative, water conservation basins may be reconstructed and relocated within the Borrow Pit. Compared to the proposed project, the number of daily trips would increase during any reconstruction of the water conservation basins. During the operational phase of the water conservation basins, daily trips would be similar to what currently exists. Overall, the relocation of the water conservation basins would result in an increase in trips when compared to the proposed project as water conservation activities would not have those trips associated with the reconstruction of the basins. Therefore, temporary impacts to the circulation system during construction of the relocated

basins would be greater under this alternative when compared to the proposed project, while operational impacts would be similar.

Utilities and Service Systems. The Mining of Existing Lease Areas Alternative would result in an increased amount of annual yield of aggregate mined, would utilize more water, and would generate more wastewater and solid waste as compared to the proposed project, on a cumulative basis. This is because the expanded aggregate reserves would extend the life of mining operations. The limit of 6.0 MTPY means that on an annual basis, however, the rates of water use, wastewater, and solid waste would be the same. Because of the deferral of any utility use reductions for present comparison purposes, the utility impacts of this alternative are considered similar to the proposed project..

Because aggregate mining activities would be relocated to a different area within the project site, however, the relocation may displace existing utility systems, such as EVWD's Well No. 125. In addition, if the existing groundwater recharge basins in the proposed Cone Camp quarry area could not be replaced, there would likely be a significant impact to the region's ability to perform recharge of the Bunker Hill Basin. The potential displacement of existing utility systems may result in a physical adverse impact to the environment that would not occur under the proposed project. Therefore, implementation of this alternative would result in impacts greater than those identified for the proposed project.

Cumulative Impacts. Under the Mining of Existing Lease Areas Alternative, cumulative short-term impacts associated with the aggregate mining component would remain the same as the proposed project because an annual aggregate yield of 6.0 million tons would be extracted under both the proposed project and this alternative. Cumulative impacts associated with long-term operational air quality impacts would increase, because of the larger anticipated life of the mining activity, as compared to the proposed project. These impacts are considered to be cumulative in nature since several of the criteria pollutants are designated non-attainment status or are key contributors toward the creation of non-attainment status air pollutants within the South Coast Air Basin. Since the amount of traffic and noise would also increase in comparison with the proposed project, cumulative impacts associated with these issues would be greater when Alternative 2 is compared to the proposed project.

With the water conservation component, if the spreading basins are constructed in the Borrow Pit, cumulative short-term construction air quality impacts would be increased due to the relocation and construction of water conservation basins, which would not occur under the proposed project. These impacts are considered to be cumulative in nature since several of the criteria pollutants are designated non-attainment status or are key contributors toward the creation of non-attainment status air pollutants within the South Coast Air Basin. Cumulative impacts associated with long-term operational air quality impacts would be the same as the proposed project as operational activities would include operation/maintenance activities. The water conservation component under this alternative would only increase traffic and noise volumes in the project vicinity during the construction phase. The traffic and noise associated with the construction of the water basins would cease once construction is complete, however, and are not considered cumulative effects.

Conclusion. Under the Mining of Existing Lease Areas Alternative, visual resource impacts associated with the aggregate mining component would be increased in comparison to the proposed project. Cumulative air quality and traffic impacts associated with the aggregate mining component would be greater under this alternative than it would under the proposed project. This alternative would allow mining in large tracts of undisturbed land that would affect wildlife connectivity and corridors between the San Bernardino Mountains and the Santa Ana River. The consolidation of the better undisturbed habitat through the land exchanges and additional lands planned for habitat conservation, management of the habitat lands throughout the Wash, and an overall HCP would not

occur. Therefore, biological impacts with Alternative 2 are considered greater than the proposed project.

Because impacts to the cultural resources are unknown, impacts associated with these resources may be greater under the aggregate mining component for this alternative than the proposed project. The operational noise levels would be greater for the aggregate mining component under this alternative than what was identified for the proposed project. Impacts to the operation of local roadways and intersections would be similar to the project, but impacts to the regional freeway system would be greater than those identified for the proposed project.

Visual resource impacts associated with the water conservation component under Alternative 2 would be similar to the proposed project as any relocation of the water conservation basins would be within an area already impacted by existing water conservation activities. The area for water conservation basins would be limited by this alternative more than with the proposed project and more than with any other alternative due to mining activities. If the basins were abandoned, utility impacts may result from loss of the groundwater recharge facilities. If the basins were replaced, impacts related to short-term construction-related air quality would be greater due to the construction of water basins. Because impacts to the biological resources and cultural resources are unknown, impacts associated with these resources may be greater associated with the water conservation component for this alternative than the proposed project. Temporary noise impacts would be greater, as construction of water basins would occur under this alternative. Operational noise impacts would be similar, as operational activities associated with the water conservation component are similar to what was identified for the proposed project. There would be trips associated with water basin construction activities, which do not occur in the proposed project; therefore, construction traffic impacts would be greater than what was identified for the proposed project. However, operational traffic generated by water conservation activities would be similar to the proposed project as water conservation activities would consist of operation/maintenance actions.

Alternative 3: Limited Mining in Expanded Quarries Alternative

This alternative was selected to limit aesthetics impacts of the proposed project, while providing for continuation and expansion of the mining operations. This alternative also includes the land exchange between Robertson's and the SBCFCD to create a larger contiguous Santa Ana River Woollystar Preservation Area.

The mining operations would be conducted in the existing areas as well as in expanded locations within the Planning Area. (Figure 6.3) Mining would be expanded into the north central portion of the project area into the New Orange Street Quarry that is currently designated as Water Conservation and is planned for BLM ACEC in the proposed project. For the Limited Mining in Expanded Quarries Alternative, the tonnage permitted to be mined and processed per year would remain the same as the baseline of 4.5 MTPY currently being processed by the two mining plant facilities. Cemex is currently averaging 2.5 million tons per year while Robertson's is averaging 2 million tons per year. With this alternative, no new mining access roads would be constructed. The mining companies would utilize their existing internal haul roads and existing transportation routes. Orange Street-Boulder Avenue and 5th Street would continue to be utilized by Cemex for transportation of sand and gravel from its Orange Street Processing Plant. Robertson's would continue to utilize Alabama Street as the point of ingress and egress for the products from its processing plant. The BLM land exchange would not take place as it does in the proposed project and the property that would have become part of the BLM ACEC as part of the land swap would be mined. In addition to the mining land use described above, Alternative 3 includes Water Conservation and Flood Control Areas similar to the proposed project, although the Phase 3 area of potential future water conservation facilities, as shown in Figure 3.12, would be lost.

Six environmental issues under Alternative 3 would have similar impacts as the proposed project. These include the following:

- Agricultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Population and Housing
- Utilities and Public Services

A discussion of these issue areas was provided in Section 6.2.2 and is not repeated. The remaining environmental issues would, in some cases, result in similar impacts, but would be different enough to be discussed separately.

Aesthetics. Similar to the discussion for Alternative 2 above, this alternative would involve expansion of mining into areas that would be undisturbed under the proposed project, specifically in the north half of Section 12. Nevertheless, this alternative does move the bulk of the mining along the Orange Street/Boulder Avenue right of way corridor. Under the proposed project, both sides of this right of way would be fully mined, as it traverses through what essentially is the center of the mining footprint area. Under Alternative 3, as demonstrated in Figure 6.3, all aspects of this corridor except the existing Orange Street Plant located on the east side of the Orange Street-Boulder Avenue right of way would be preserved in its present condition, and maintained as open space. While Alternative 3 does involve slightly more acreage for mining, at 1,309 acres versus the project's 1,195 acres, the removal of mining from a more heavily-traveled corridor to interior areas of the Santa Ana Wash would result in diminished aesthetic impacts, because of the greater exposure the Orange Street/Boulder Avenue right of way corridor has to the population. As such, this alternative reduces aesthetic impacts when compared to the project.

Air Quality. The locations to be mined as part of Alternative 3 would be expanded to the northeast and would be larger in acreage when compared to the proposed project. However, the amount of aggregate to be mined and processed on a yearly basis would likely be reduced as part of this alternative, because of the 4.5 MTPY production limit. Compared to the proposed project, the types of equipment used to perform mining operations and to transport materials would be the same. The amount of equipment and vehicles necessary for the implementation of Alternative 3 would be less than what would be required to implement the proposed project. The reduction of mining equipment and vehicles used to transport extracted aggregate would create fewer annual emissions than the proposed project, however, as mining activities expanded the east the distances that aggregate would have to be transported would be increased, generating more dust pollutants. The elimination of the new 5th Street access would mean mining transport trucks would travel on existing public rights of way as under present baseline conditions, increasing the chance of idling in traffic congestion, which is expected to increase over time. This could add to long-term emissions impacts. Additionally, the expanded mining areas would be closer to residential sensitive receptors, creating more of an impact than the proposed project on balance. Mining activities as part of this alternative are considered to result in an increase of air quality impacts in comparison to the proposed project.

Biological Resources. Alternative 3 would result in greater land disturbance than the proposed project. Although the aggregate mining production yields would be reduced, the mining area footprint would be larger than the proposed project. Mining activities would take place on the land that under the project would become BLM ACEC, disturbing vegetation types that are habitat for protected species. Like the proposed project, under this alternative biological impacts would remain significant and unavoidable.

The areas to be disturbed would be greater under Alternative 3 when compared to the proposed project. Slender-horned spineflower, Santa Ana River woollystar, and San Bernardino kangaroo rat habitat includes alluvial fan sage scrub vegetation types while the coastal California gnatcatcher and Los Angeles pocket mouse habitat includes alluvial fan sage scrub and upland sage scrub vegetation

types. Consequently, impacts to these species have been assessed based on the total acreage of alluvial fan sage scrub and upland sage scrub that would be affected by each alternative. As shown in Table 6.E, the Limited Mining in Expanded Quarries Alternative would impact 550 acres of alluvial fan and upland sage scrub compared to 546 acres of disturbance that would occur as a part of the proposed project.

Table 6.E – Vegetation Type Within Alternative 3 Mining Area

Vegetation Type	Alt 3 Acres	Existing Acres	Additionally Impacted Acres
Chamise Chaparral	80	0	80
Chamise Chaparral/ Non-Native Grassland (NNG)	0	0	0
Developed/ Ruderal	630	628	2
NNG	38	5	33
Recharge Basin	11	0	11
Riversidean Alluvial Fan Sage Scrub - Intermediate	130	109	21
Riversidean Alluvial Fan Sage Scrub - Intermediate/ Mature	283	72	211
Riversidean Alluvial Fan Sage Scrub - Mature	115	1	114
Riversidean Alluvial Fan Sage Scrub - Mature/ NNG	0	0	0
Riversidean Alluvial Fan Sage Scrub - Pioneer	0	0	0
Riversidean Upland Sage Scrub	22	17	5
Total	1,309	832	477

Slightly more alluvial fan and upland sage scrub are impacted by this Alternative. The BLM land exchange would not occur as part of this alternative, and would limit the ACEC area that could be set aside. In addition, the habitat preservation areas would not be managed, resulting in increased impacts to the biological resources over the proposed project.

Cultural Resources. Implementation of Alternative 3 would require soil disturbance for aggregate mining activities, and over a larger potential area than the mining activities involved with the proposed project. Cultural resources which may be present in areas where the aggregate mining would occur would likely have a similar occurrence rate as that identified for the proposed project site. In this regard, incidents of impacts are anticipated to be similar to the proposed project, but because of the expanded scope of mining acreage (1,309 acres as opposed to 1,195 acres for the proposed project) the possibility for cultural resources impact is incrementally higher. Mitigation measures imposed on the project to monitor and catalog any uncovered cultural resources would apply equally to Alternative 3, and would likely render any impacts to cultural resources less than significant. Still, because of the incremental increase Alternative 3 entails for ground surface disturbance to accommodate larger mining acreages, the possibility for impacts to cultural resources is incrementally higher, and somewhat greater than that posed by the project.

Hydrology and Water Quality. Under this alternative, existing water conservation basins would not be disturbed to accommodate mining activities. The area for potential future water conservation activities would be limited to areas east of the MWD Inland Feeder right of way, however, because of mining in the north half of Section 12. The Phase 3 area in Figure 3.12 would therefore be unavailable. Due to the limited impact to existing groundwater recharge facilities, and continued availability of other areas for potential groundwater recharge, there would be no significant impacts related to groundwater recharge, and hydrology effects would be similar to the proposed project.

Land Use and Planning. Under Alternative 3, there would be no exchange of lands between the District and BLM, and therefore the amendment to the South Coast Resource Management Plan to

accommodate the inclusion of exchanged lands from the District to BLM in the ACEC would no longer be required. Similarly, legislation required to implement the land exchange would not be needed. In this respect, the Land Use and Planning impacts of Alternative 3 are less than those implicated by the proposed project. In addition, there would be no need for transfer of the portion of the land in the northern half of Section 12 from existing mining leases between Cemex and the Conservation District, since this area is already under lease. Although this is as much a contract issue as a Land Use and Planning one, it does indicate impacts would be less under Alternative 3.

Noise. Noise impacts associated with this alternative would be increased. The amount of aggregate extraction would be increased and the amount of mining-related traffic would be increased on site and on public streets, resulting in an incremental increase in traffic-related noise. The proposed mining locations under Alternative 3 would be closer to nearby sensitive receptors than those in the proposed project and there is the potential for the requirement of a portable crusher for the mining that would take place in the north-central portion of the project. Noise impacts of this alternative would therefore be greater than the proposed project.

Mineral Resources. The entire project area is classified with an MRZ-2 designation, indicating that significant mineral deposits are present within the project area. The Planning Area encompasses an area approximately 4,467 acres in size. Of these, 1,309 acres would be devoted to aggregate mining activities in Alternative 3. This alternative would keep the total tonnage yield the same as the proposed project, at approximately 184 million tons. The proposed project would allow the extraction of 6.0 million tons of aggregate per year and this alternative would allow the extraction of 4.5 million tons of aggregate per year. The impacts related to loss of available aggregate resources for Alternative 3 would be similar to those created by the proposed project.

Recreational and Parks. This Alternative is essentially the same as the project with respect to Recreation and Trails, with the exception that portions of the Old Rail Line Trail would be lost to mining areas. This would result in a negative impact on the availability of recreational trails as opposed to the project, which results in a somewhat greater impact as compared with the proposed project.

Transportation. In comparison to the proposed project, this alternative would result in a reduction in trip generation on an annual basis, since this alternative presumes a 4.5 MTPY production rate, compared to the 6.0 MTPY rate for the proposed project. Since the number of annual trips resulting from the aggregate mining component would be reduced, impacts to the existing circulation system and freeway on- and off-ramps would be correspondingly reduced in comparison to the proposed project.

On a cumulative basis, however, transportation impacts from this alternative can be expected to be greater. The access to additional mining acreage will extend the life of mining operations under this alternative, such that traffic impacts will occur over a longer time. In addition, the aggregate truck traffic would not be removed from Orange Street-Boulder Avenue and 5th Street, which would increase truck traffic for the affected intersections and the developing 5th Street commercial corridor in the City of Highland. Taken together, these factors are recognized as a greater impact on traffic as opposed to the project.

Utilities and Service Systems. Alternative 3 would expand the amount of aggregate that could be mined but would allow mining to occur in the areas proposed for habitat as part of the project. This alternative would result in a lower annual yield of aggregate mined, and on an annual basis would utilize less water, and would generate less wastewater and solid waste compared to the proposed project. On a cumulative basis, however, the life of the mining activity would be extended by the

addition to the acreage of mined reserve, so cumulative impacts would likely be greater. Relocation of Observation Well No. 4 would still be required under this alternative, similar to the project. The mining areas proposed as part of this alternative are contiguous to the existing mining areas. No new construction or relocation of utility systems would be necessary. Therefore, the implementation of this alternative would result in similar impacts compared to the proposed project.

Cumulative. Under the Limited Mining in Expanded Quarries Alternative, cumulative long-term and short-term impacts associated with the aggregate mining component would be reduced as the annual yield of 4.5 million tons is 1.5 million tons less per year than the proposed project. Cumulative impacts associated with long-term operational air quality impacts would be increased in comparison to the proposed project due to the increase in the distance of haul truck trips. Since the amount of on road traffic and noise would be reduced in comparison to the proposed project, cumulative impacts associated with these issues would be decreased. The loss of the new 5th Street access would mean continuation of baseline use of public rights of way by haul trucks, foregoing the circulation system advantage; the project affords of rerouting such traffic to a private haul road. Traffic impacts under this alternative are therefore worse. Land use impacts would be better under this alternative, and aesthetic considerations would be improved, since additional mining would be located away from well-traveled roadway corridors.

Conclusion. The Limited Mining in Expanded Quarries Alternative offers potentially less impact to aesthetics in the Orange Street/Boulder Avenue corridor, but results in significantly more impacts to biological resources. However, annual production levels reduce short-term impacts to traffic, air quality, and utilities, but the expansion of the amount of mining reserves means additional cumulative effects from each of these area, from the extended life of mining activities. The loss of the 5th Street access and private haul road means traffic benefits afforded by the project to local streets would be lost. Loss of mining aggregate reserves are less for this alternative than the proposed project. The additional distance required for trucks to haul mined material to processing plants likely outweighs any air quality benefits from reduced near-term traffic because of lower production levels, resulting in additional air quality impacts.

Alternative 4: Reduced Mining Footprint Alternative

This alternative essentially parallels the project, but with an approximately 25% reduction in the amount of additional mining. Under the project, some 363 acres of additional mining are proposed. Alternative 4 reduces this by approximately 89 acres, located south of the proposed East Quarry North and east of the proposed East Quarry South, or the area southeasterly of the shaded "Existing Aggregate Mining Area" shown on Figure 3.17. This area was chosen for reduction because its elimination from the mining footprint would improve biological impacts from the project. As Figure 4.4.4 shows, this roughly 89 acre area is populated with various Santa Ana River woollystar plants. Avoidance of this area would reduce the impact of the project's disturbance of existing woollystar habitat. In addition, this 89 acres is immediately adjacent to existing WSPA habitat preserve.

Under this alternative, the 89 acres excluded from the mining footprint would be unmanaged habitat, left in its natural state. It would not be included in managed habitat reserves, because reduced impacts from agreed habitat mitigation ratio levels under the project present no requirement for expanded mitigation. As such, this area would be available for potential future mitigation of additional projects that might be proposed for the Planning Area, outside the scope of this EIR.

Under Alternative 4, virtually all other aspects of the project would remain the same. The mining production level would be 6.0 MTPY, and the new 5th Street access would be constructed. Roadway rights of way and trails would still be receiving biological clearance under this alternative, and the same Land Use and Planning impacts as required for the project would occur.

Air quality impacts under this alternative are essentially the same as the project on an annual basis, since the project's air quality analysis is geared toward annual emissions levels. Cumulatively, however, there would be a marginal decrease in impacts, since the reduction in mining area would proportionately decrease the life of the project's mining activities. The decrease in the mining footprint would also decrease aesthetic impacts.

The loss of the 89 acres, or 25% of the proposed addition to the existing baseline mining acreage, is estimated to equate to roughly 26 million tons of lost aggregate. This amounts to approximately 15% of current estimated reserves.¹

Nine environmental issues would have similar impacts as for the proposed project. These include the following:

- Agricultural Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Population and Housing
- Utilities and Public Services
- Recreation and Parks

A discussion of these issue areas was provided in Section 6.2.2 and is not repeated. The remaining environmental issues would, in some cases, result in similar impacts, but would be different enough to be analyzed separately under this alternative.

Aesthetics. Under the Reduced Mining Footprint Alternative, some 89 acres would be removed from mining production. This area is currently undisturbed. It is located adjacent to existing active mining operations, but also adjacent to the Santa Ana River and the adjacent WSPA, both of which are undisturbed.

Forbearance from excavation in this 89 acre area will decrease the aesthetic impacts of the project resulting from mining operations. As such, the aesthetic impacts of Alternative 4 will be reduced somewhat from the proposed project.

Air Quality. On an annual basis, the air quality impacts associated with Alternative 4 will parallel those of the project. As described in more detail in Section 4.3, the project's air quality impacts were measured against thresholds for annual emissions levels. Alternative 4 maintains the 6.0 MPTY production rate, in large measure to secure the benefits of the additional 5th Street access for preservation of local circulation system traffic benefits. As such, no appreciable decrease in annual truck traffic trips can be expected. Cumulatively, however, Alternative 4 results in a loss over the life of the mining aspects of the project of 26 million tons, or approximately 15% of current estimated reserves of approximately 180 million tons. This 15% reduction in overall acreage can be expected to translate to a shortening of the life of the project by a similar amount. Over the estimated approximately 60 year life of the mining aspect of the project, this 15% reduction means that under Alternative 4 the project would end 9 years earlier. On a cumulative air quality basis, the cessation of emissions some 9 years earlier would have a cumulatively beneficial impact. Because of the deferred time horizon for realization of this beneficial impact, however, for comparison purposes, Alternative 4 is considered to be similar to the project in terms of air quality impacts.

Biological Resources. The Reduced Mining Footprint Alternative would include ground-disturbing activities for aggregate mining, roads, and other components of the proposed project similar to the

¹ This is calculated as follows: 89 acres x 43,560 sf per acre x 120 ft. (depth) ÷ 27 cf per cy x 1.5 tons per cy = approximately 26 million tons.

project, except for avoided 89 acres. As required for the proposed project, mitigation to address potential impacts to sensitive species would also be required under this alternative. Like the proposed project, under this alternative biological impacts would remain significant and unavoidable. Because the total amount of land set aside for mining is decreased when compared to the proposed project, the impacts associated with biological resources would also be correspondingly decreased as fewer biological resources are disturbed.

Slender-horned spineflower, Santa Ana River woollystar, and San Bernardino kangaroo rat habitat includes alluvial fan sage scrub vegetation types while the coastal California gnatcatcher and Los Angeles pocket mouse habitat includes alluvial fan sage scrub and upland sage scrub vegetation types. Consequently, impacts to these species have been assessed based on the total acreage of alluvial fan sage scrub and upland sage scrub that would be affected by this alternative. As shown in Table 6.F, Alternative 4 would impact 465 acres of alluvial fan and upland sage scrub compared to 546 acres of disturbance that would occur as a part of the proposed project.

Table 6.F – Vegetation Type within Alternative 4 Mining Area

Vegetation Type	Alt 4 Acres	Existing Acres	Additionally Impacted Acres
Chamise Chaparral	0	0	0
Chamise Chaparral/ Non-Native Grassland (NNG)	0	0	0
Developed/ Ruderal	637	628	9
NNG	4	5	-1
Recharge Basin	0	0	0
Riversidean Alluvial Fan Sage Scrub - Intermediate	220	109	111
Riversidean Alluvial Fan Sage Scrub - Intermediate/ Mature	219	72	147
Riversidean Alluvial Fan Sage Scrub - Mature	9	1	8
Riversidean Alluvial Fan Sage Scrub - Mature/ NNG	0	0	0
Riversidean Alluvial Fan Sage Scrub - Pioneer	0	0	0
Riversidean Upland Sage Scrub	17	17	0
Total	1,106	832	274

Under Alternative 4, the mitigation acreages developed by the Wash Plan participants and accepted by the resource agencies who participated in the process, would not be diminished. This would increase the mitigation ratios, because if 89 acres less area is affected by mining disturbance. In this sense Alternative 4 would reduce biological impacts, as compared to the project.

Mineral Resources. The entire project area is classified with an MRZ-2 designation, indicating that significant mineral deposits are present within the project area. The Planning Area encompasses approximately 4,467 acres. Of these, 1,195 acres would be devoted to aggregate mining activities under the project. This would be reduced by 89 acres under Alternative 4. Alternative 4 would reduce the amount of aggregate mined on a cumulative basis in comparison to the proposed project, in the amount of approximately 26 million tons. This would result in an increased impact on mineral resources as compared to the proposed project because use of aggregate resources, a regionally and locally significant non-renewable resource, would be incrementally foreclosed.

Noise. The reduction in on-road project-related traffic associated with the aggregate mining component under this alternative would result in an incremental decrease in traffic noise, similar to the project. Under the proposed project, the increase in future traffic noise along local roadway segments would not increase beyond the threshold of perception. The areas proposed to be removed from mining as a part of Alternative 4 would generate proportionately less noise than the project. Still, the 89 acres removed from mining is also well removed from any nearby residential sensitive

receptors, and therefore would result in no increased impact at these residences. When compared to the proposed project, Alternative 4 would therefore be similar to noise levels at nearby residential sensitive receptors, and overall noise impacts within the area.

Under this alternative, the relocation of an observation well would occur, as with the project. When Alternative 4 is compared to the proposed project, long-term impacts related to noise would be similar to those identified for the proposed project.

Transportation. Alternative 4 would generate approximately the same number of daily trips, because production levels would be the same. The only difference from the project would be from the potential earlier cessation of mining activities over the life of the project, by an estimated 9 years. Thus, there may be a cumulative decrease in traffic over time, as compared to the project's longer project life for mining. These cumulative benefits would still occur long after the 2030 year used for future traffic impact analysis in the traffic study, however, and at this point do not admit to quantification. Because such cumulative benefits are so remote, for comparison purposes, Alternative 4 traffic impacts are considered to be the same as the project.

Under this alternative, the relocation of an observation well would occur similar to what was identified in the proposed project and the relocation of water recharge facilities would be necessary. When Alternative 4 is compared to the proposed project, long-term impacts to traffic would be reduced compared to those identified for the proposed project and short-term construction traffic impacts would be increased.

Utilities and Service Systems. Under Alternative 4, the amount of aggregate that could be mined and the amount of land that would be set aside for aggregate mining would be reduced when compared to the proposed project. This alternative would result in a lower total yield of aggregate mined, but annual production levels are likely to be the same as the project, so annually would use the same water, and over the near term would generate the same amount of wastewater and solid waste as compared to the proposed project. On a cumulative basis, utility demand would be less than the proposed project, but these reductions would only occur at the end of the mining activity, due to the shortened time when reserves would be exhausted. Because of the deferral of any such reductions, for present comparison purposes the utility impacts of this alternative are considered to be similar to the project. With this alternative, Observation Well No. 4 would also have to be relocated, so all impacts in connection with this well relocation would be the same as the project.

Under this alternative, the same water conservation activities identified in the proposed project would occur. It is not anticipated any potential new water recharge facilities would require additional utilities or services over what are planned as part of the proposed project. When compared to the proposed project, the water conservation component under Alternative 4 would have a similar impact to utility systems.

Cumulative. Alternative 4 would create a decreased cumulative impact on air quality and traffic. It would decrease the impacts to aesthetics, and marginally exacerbate impacts relating to the loss of long-term availability of aggregate reserves. Its primary reduced impact, however, is to biological resources. The avoidance of 89 acres of mining area would decrease the proposed project's biological impacts, and since Alternative 4 does not propose a proportionate reduction in managed habitat set-aside acreage, it improves the proposed project's overall mitigation ratio.

Conclusion. The primary benefit of this alternative is a decrease in biological disturbance and the availability of 89 additional acres of potential mitigation land for future projects. Its primary detriment is loss of aggregate reserves. It would decrease aesthetic impacts. In most other respects, it is similar

to the project. This alternative would create a decreased cumulative impact on air quality emissions and traffic. In other respects, it is similar to the project except for improvements to biological impacts.

6.3 COMPARISON OF PROJECT ALTERNATIVES

The following discussion compares the impacts of each alternative with the impacts of the proposed project, as detailed in Section 4.0 of this EIR. Table 6.G compares the impacts of the alternatives with those of the proposed project. This table identifies whether the alternative results in: (1) a reduction of the impact; (2) a greater impact than the project; and (3) the same impact as the project.

Table 6.G – Comparison of Alternatives to the Proposed Project

Environmental Issue	Proposed Project	Alternative 1: No Project	Alternative 2: Mining of Existing Lease Areas	Alternative 3: Limited Mining Operations in Expanded Quarries	Alternative 4: Reduced Mining Footprint
Aesthetics	←	↓ Reduced somewhat	↑ Somewhat greater	↓ Reduced somewhat	↓ Reduced somewhat
Agricultural Resources	←	Similar	Similar	Similar	Similar
Air Quality	→	↓ Reduced somewhat	↑ Somewhat greater	↑ Somewhat greater	Similar
Biological Resources	→	↓ Reduced somewhat	↑ Somewhat greater	↑ Somewhat greater	↓ Reduced somewhat
Cultural Resources	←	↓ Reduced somewhat	↑ Somewhat greater	↑ Somewhat greater	Similar
Geology and Soils	←	Similar	Similar	Similar	Similar
Hazards and Hazardous Materials	←	↓ Reduced somewhat	Similar	Similar	Similar
Hydrology and Water Quality	←	↓ Similar	↑ Somewhat greater	Similar	Similar
Land Use and Planning	←	↓ Reduced somewhat	↓ Reduced somewhat	↓ Reduced somewhat	Similar
Loss of Mineral Resources	→	↑ Somewhat greater	↓ Reduced somewhat	Similar	↑ Somewhat greater
Noise	←	↑ Somewhat greater	↑ Somewhat greater	↑ Somewhat greater	Similar
Population and Housing	←	Similar	Similar	Similar	Similar
Utilities and Public Services	←	Similar	Similar	Similar	Similar
Availability of Recreation and Parks	←	↑ Somewhat greater	↑ Somewhat greater	↑ Somewhat greater	Similar

Table 6.G – Comparison of Alternatives to the Proposed Project

Environmental Issue	Proposed Project	Alternative 1: No Project	Alternative 2: Mining of Existing Lease Areas	Alternative 3: Limited Mining Operations in Expanded Quarries	Alternative 4: Reduced Mining Footprint
Transportation and Traffic	→	↑ Somewhat greater	↑ Somewhat greater	↑ Somewhat greater	Similar
Utilities and Service Systems	←	↓ Reduced somewhat	↑ Somewhat greater	Similar	Similar

Notes: ← = Less than significant impact, with or without mitigation measures incorporated.

→ = Greater than significant impact, with mitigation measures incorporated.

↑ = Somewhat greater impact than the proposed project.

↓ = Impact is reduced somewhat than the proposed project.

6.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

As detailed in the table above, Alternative 1, the No Project alternative, is the environmentally superior one. In comparison with the proposed project, it reduces impacts in the following different areas: Aesthetics, Air Quality, Biological Resources, Cultural Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, and Utilities and Service Systems.

The No Project alternative is not recommended for implementation under this EIR, however, because it fails to meet a number of the defined project objectives. These include:

- Set aside and maintain habitat for sensitive, threatened, or endangered species in the Planning Area, and prevent colonization by non-native plants and animals, as mitigation for impacts from other aspects of the project, such as mining, designation of areas for future roadways or water spreading facilities;
- Accommodate the relocation and expansion of aggregate mining quarries to help ensure the long-term availability of high quality aggregate reserves located within the Planning Area for local and regional use, consistent with the MRZ-2 designation or reserves in this area, and do so on land adjacent to existing quarries, that have mostly been disturbed;
- Accommodate arterial roads and highways to provide safe modes of travel; and
- Provide trails for public enjoyment of the existing environment.

CEQA Regulations § 15126.6(e)(2) also requires that, if the No Project alternative is environmentally superior, an environmentally superior alternative among the other alternatives must be identified. Here, that alternative is Alternative 4, the Reduced Mining Footprint Alternative. This alternative achieves most of the project objectives, failing incrementally only in the relocation and expansion of aggregate mining quarries, due to the reduction in total mined area for the project. Alternative 4 reduces aesthetic impacts, impacts to biological resources, and has cumulatively reduced traffic and air quality impacts. It accomplishes each of these reductions in impacts without exacerbating or increasing any of the other impacts of the project, save for the long-term availability of aggregate resources.

Still, this is not the preferred alternative under this EIR, for a number of reasons. First and foremost among these is consideration of the long deliberative process that the Wash Plan participants came to in balancing the environmental and economic aspects of the project. The additional 89 acres, and 26 million tons of aggregate reserves, have significant long-term value not only to the mining operators, but also the local economy. Making these additional reserves available is consistent with the area's MRZ-2 designation, and in line with projections for regional aggregate demand, which far exceed local supplies. This economic value was considered by all Wash Plan participants in coming to the compromises leading to the definition of the mining area of the proposed project. Further, the ability of the District to secure mining royalty revenues from this incremental additional reserve will allow it to sustain its water conservation operations, and may provide an important income source to meet the requirements of the management of the habitat set aside under the habitat enhancement program, and the eventual HCP approval from the United States Fish and Wildlife Service.

Second, the incremental benefits of Alternative 4 are essentially ones of degree only, and not of kind. Under this alternative, significant biological impacts will still occur, and the potentially preserved Santa Ana woollystar populations have already been considered in the habitat set-aside acreages that led to the compromise allocations of mining, habitat, and water conservation areas under the Wash Plan Concept Plan that led to the present Upper Santa Ana Wash Land Management and Habitat Conservation Plan.