2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

Nine alternatives were evaluated for this Draft Environmental Impact Statement/Supplemental Environmental Impact Report (DEIS/SEIR). Six alternatives were eliminated with specific rationales explained at the end of this chapter, and three alternatives have been carried forward for detailed analysis in this DEIS/SEIR. Under alternative A, the No Action Alternative, lands would continue to be managed and used as intended or planned, including leases for future mining. Authorization for incidental take would be sought for projects on a case-by-case basis. Alternative B, the Proposed Action, would allow the United States Fish & Wildlife Service (USFWS) to issue an incidental take permit for Covered Activities/Projects, and for the Conservation District to implement the HCP and complete Covered Activities/Projects. Alternative C is implementation of the 2008 Upper Santa Ana River Wash Land Management and Habitat Conservation Plan (2008 Land Management Plan).

NEPA regulations (40 Code of Federal Regulations [CFR] 1502.14) state that an EIS must consider a reasonable range of alternatives that could accomplish some or all of the objectives established for the Proposed Action. “Reasonable” alternatives are those that could be carried out based on technical, economic, environmental, and other factors. Alternatives that do not meet some or all of the objectives or do not satisfy the Lead Agency's “reasonableness” criteria need not be evaluated in the Draft EIS. Section 15126.6 of the California Environmental Quality Act (CEQA) Guidelines also requires the EIR evaluate a reasonable range of alternatives that could feasibly attain the basic objectives of a Project. NEPA regulations and CEQA Guidelines also require a No Action or No Project, respectively, Alternative be analyzed. Alternatives to the Proposed Action/Projects were developed utilizing an interdisciplinary team that included the Conservation District, BLM, and the USFWS.

2.2 ALTERNATIVE A: NO ACTION ALTERNATIVE

In the No Action Alternative, the USFWS would not issue the incidental take permit (ITP) for Covered Species. Current mining and water conservation would continue.

Aggregate mining operations would continue producing an average of 4.0 to 4.5 million tons per year (MTPY) of aggregate materials. The total average MTPY is the average production numbers of both Cemex’s and Robertson’s operations within the Plan Area. The existing permitted mining would be mined to completion, but no additional mining permitting in the Plan Area is presumed.

The ITP would not be issued nor the HCP implemented. Individual projects within the Plan Area would have to be addressed independently once they are proposed. Each newly proposed project listed in the draft HCP would be analyzed for CEQA and NEPA compliance. Each new project with impacts to state or federally listed species may have to obtain a Section 10 permit or a Section 7 incidental take statement/consultation in conformance and compliance with FESA (if a Federal nexus exists) and/or a

2081 permit in compliance with CESA. Other regulatory permits could be required as well. The Conservation Strategy, which includes the designation of new onsite conservation of lands, additional management on already conserved lands, biological goals and objectives for 5 covered species, adaptive management and monitoring, and habitat restoration and maintenance, would not be implemented. The lack of a comprehensive plan would result in piecemeal approach to both development and conservation, greatly reducing the potential for a coordinated conservation strategy in the Plan Area. Lack of coordinated strategy could result in further fragmentation of conserved habitat and inconsistent and inefficient management and monitoring of species and their habitat.

2.3 ALTERNATIVE B: PROPOSED ACTION/PROJECTS

The Proposed Action is the USFWS's issuance of permits for authorization of incidental take consistent with the HCP. Covered Activities with incidental take authorization, anticipated take, and conservation included in the HCP are described below. This DEIS/SEIR analyzes and addresses anticipated environmental effects resulting from the Federal action and from the related implementation of the HCP by the applicants. This DEIS/SEIR does not obviate the need for project-specific CEQA or NEPA analysis.

This alternative includes issuance of a 30-year ITPs by USFWS to the Conservation District and SBCFCD; approval and execution of the Implementing Agreement (IA) for the HCP; and implementation of the HCP by the Permit Applicants. The HCP is intended to establish and implement a program to conserve ecologically important resources in the Plan Area. In addition to the Permittees, the following parties plan to apply to be Participating Entities under the Conservation District ITP: City of Redlands, including the Redlands Municipal Utility District; City of Highland; SBVMWD; EVWD; Cemex; and Robertson's.

Only the Conservation District will have the ability to convey the permit authority to the Participating Entities under Certificates of Inclusion (COI). Each COI will be associated with a single Participating Entity and will address one or more Covered Activities.

The HCP identifies a number of Covered Activities. These activities and projects were considered when assessing the total amount of take of Covered Species that is expected in the Plan Area over the life of the permits and in developing the overall HCP conservation strategy. A summary of the proposed action is presented below, describing the Plan Area, the covered activities, the covered species, the proposed conservation strategy, and the aquatic resources plan. For more details on all of these topics, see the HCP.

Plan Area

The permit area for the proposed action is the Plan Area which encompasses approximately 4,892.2 acres extending approximately 6 miles westward from Greenspot Road in the City of Highland to Alabama Street in the City of Redlands. Greenspot Road forms the northern and eastern boundary of the Plan Area and the bluffs on the south side of the Santa Ana River generally form the southern boundary (Figures 1.0-2, USGS Topo and 1.0-6, Wash Plan HCP Subcomponents). It includes reaches of Mill and Plunge Creeks and the Santa Ana River and the upland areas in between them. Existing land uses in the

Plan Area consist of water conservation and storage facilities, flood control, habitat conservation, aggregate mining, agriculture, and roadways. Aggregate mining is conducted in the western half of the Plan Area, while the Conservation District maintains spreading basins for water recharge in the eastern section. Flood Control maintains flood control facilities along the Santa Ana River, Plunge Creek, and City Creek. The predominant native plant communities are Riversidean alluvial fan sage scrub (RAFSS) and Riversidean sage scrub (RSS) with components of chaparral and non-native grassland.

Covered Activities

Figure 2.0-1, *Covered Activities* shows the specific location of each covered activity, the category of activity, and the entity that will complete the activity. In order to track Covered Activities in tabular impact calculations and locate projects in the figures in this document, the Covered Activities have been assigned a unique identification code in the HCP. Refer to HCP Table 2-1 for a list of Covered Activity identity codes associated with each Covered Activity. For more detailed description of each Covered Activity, refer to the HCP.

Acreages reported represent the area of ground disturbance, including the project or activity footprint associated with construction or operations and maintenance. All Covered Activities associated with new or expanded facilities will be implemented during Phase 1 of the HCP, with the exception of the mining activities scheduled for implementation in Phase 2. O&M Covered Activities will occur in both phases.

The Covered Activities have been subdivided into the following categories:

Aggregate Mining—the areas in which gravel and rock (aggregate) mining operations by the Task Force members Robertson's and Cemex will continue (existing mining) and expand (new mining) as delineated in the HCP. Currently, aggregate mining and associated support activities, such as haul roads, are occurring within the Plan Area. As part of the implementation of the HCP, the existing mining area would be expanded for new aggregate mining. An expansion of the existing haul road would also occur. However, other lands currently permitted for mining would be designated for habitat conservation resulting in an overall reduction in lands available for mining. Mining infrastructure such as buildings, parking lots, lighting, settling ponds, pits, and haul roads would be operated 24 hours a day. Existing mining operations in the established mining pits would cause no new permanent impacts in these areas.[1]

New mining will occur on 401.5 acres, resulting in permanent impacts. It will occur in two phases, as outlined in Table 2.0-1 below.

[1] A small amount of acreage of temporary impacts in the existing mining areas is included in the HCP to account for the incidental take of a small number of SBKR that may enter active mining areas during periods of inactivity.

Table 2.0-1: Phasing of Aggregate Mining Activity Covered by HCP

HCP Implementation Phase	Acreage
Phase 1	201.3 acres
Phase 2	200.2 acres
Total New Aggregate Mining	401.5 acres

Aggregate mining operations are expected to result in permanent impacts to 12 historic occurrences and 1 extant patch[2] of spineflower, 29.7 acres of woolly-star habitat[3], 289.9 acres of gnatcatcher habitat, 8.8 acres of cactus wren habitat[4], and 380.8 acres of SBKR habitat. Aggregate mining operations are expected to result in temporary impacts to 33 acres of gnatcatcher nesting habitat.

Water Conservation—Water conservation and management activities, both ongoing and planned future activities are activities needed to support the conservation/recharge of water into the Bunker Hill groundwater basin for consumptive use, the monitoring of groundwater basins, and pumping to meet customer demands. The facilities required to support those water management efforts are also included. These facilities include pipeline easements, canals, maintenance roads, tanks and recharge basins, and the construction of groundwater wells. The Conservation District, SBVMWD, and EVWD, are the Task Force members associated with these activities.

Water conservation and management activities are expected to result in permanent impacts to 2 acres of woolly-star habitat, 126 acres of gnatcatcher habitat, 4.6 acres of cactus wren habitat, and 161.9 acres of SBKR habitat. Water conservation and management activities are expected to result in temporary impacts to 1.1 acres of woolly-star habitat, 4.7 acres of gnatcatcher habitat, 0.1 acres of cactus wren habitat, and 4.7 acres of SBKR habitat. (Impact acreages are from *Table 4-7, Potential Permanent Impacts of Individual Covered Activities on Covered Species* and *Table 4-8, Potential Temporary Impacts of Individual Covered Activities on Covered Species* in the HCP).

Wells and Water Infrastructure—Activities related to the creation of new wells[5] and access roads and the maintenance of existing well and access roads. Currently ten wells, some with associated tanks and boosters, are in use or proposed in the Plan Area. Four are observation wells used to monitor groundwater levels as part of the management of the Bunker Hill Basin. Also four supply wells are operating in the Plan Area. There are two municipal potable water wells located adjacent to, and east of, Orange Street near the Cemex plant. The wells service pipeline is located in the Orange Street/Boulder Avenue ROW. The Task Force members associated with these activities are SBVMWD, City of Redlands, EVWD, and the Conservation District.

[2] The distribution of spineflower in the Plan Area is quantified in two ways: (1) by determining all of the known occurrence locations and categorizing them as historic (pre-2005) or current (2005 to present); and (2) by estimating the total acreage and number of extant spineflower patches based on survey data.

[3] The distribution of woolly-star in the Plan area is quantified by indicating the total area of occupied grid areas (25 by 25 meters) documented as occupied by woolly-star.

[4] Cactus wren habitat in the Plan Area is quantified in terms of nesting habitat based on the field mapping of cactus patches suitable for nesting and buffered by 50 feet.

[5] New wells located on BLM land will require a BLM permit and new wells will also need a county permit.

Wells and infrastructure activities are expected to result in permanent impacts to 13 extant patches of spineflower, 1.7 acres of woolly-star habitat, 1.8 acres of gnatcatcher habitat, and 3.5 acres of SBKR habitat. Wells and water infrastructure activities are expected to result in temporary impacts to 0.5 acre of woolly-star habitat, 18.1 acres of gnatcatcher habitat, 0.1 acre of cactus wren habitat, and 24.9 acres of SBKR habitat.

Transportation—Activities related to the construction, operations, and maintenance of planned transportation facilities. Arterial road/highway maintenance and expansion is planned at a number of locations in the Plan Area. Four projects are proposed for coverage under the HCP: widening of two existing roadways and the construction or replacement of two additional roadways across the Plan Area. The Task Force members associated with these activities are the City of Highland and the City of Redlands.

Transportation activities are expected to result in permanent impacts to 1 extant patch of spineflower, 0.6 acre of woolly-star habitat, 0.4 acre of gnatcatcher habitat, and 13 acres of SBKR habitat. Transportation activities are expected to result in temporary impacts to 0.3 acre of woolly-star habitat, and 0.1 acre of SBKR habitat.

Flood Control—Activities related to the construction of new flood control structures and the operations and maintenance of existing and new flood control facilities. The SBCFCD maintains flood control levee structures on the Santa Ana River, Mill Creek, Plunge Creek and City Creek within the Plan Area. Regular and ongoing maintenance is required so these levees continue to provide flood protection to the public. The Task Force members are SBCFCD, City of Highland, and City of Redlands.

Flood control activities are expected to result in permanent impacts to 0.4 acre of woolly-star habitat, 4.6 acres of gnatcatcher habitat, and 13.2 acres of SBKR habitat. Flood control activities are expected to result in temporary impacts to 1.6 acre of woolly-star habitat, 9.6 acres of gnatcatcher habitat, and 79.4 acres of SBKR habitat.

Trails—The HCP Preserve Area has the potential to provide recreational benefit to those in adjoining communities and would also provide an educational resource illustrating the benefits of species and open space protection. A carefully planned trail system that does not diminish habitat and species conservation can further conservation goals as well as provide recreational opportunities. The HCP addresses Covered Species and their habitats associated with the development and operations of a trail system within the HCP Area using primarily existing roads and access easements to minimize impacts to Covered Species habitat. The trail system would be for non-motorized recreational use. Note that a conceptual trail crossing of the WSPA to connect a trail to the Santa Ana River Trail (SART) in Redlands is not a Covered Activity in this HCP, and approval of the WSPA crossing would require separate approval by the Wildlife Agencies. The WSPA crossing is included here only to provide a full description of activities contemplated in the Plan Area.

The construction, operation and maintenance of trails is covered by the HCP and is considered a conditionally compatible use, meaning trails are permissible following preparation of a Trail

Management Plan (Trail Plan) and its approval by the Wildlife Agencies. The Task Force members associated with these activities are the Cities of Redlands and Highland. Trails are expected to result in permanent impacts to 1.5 acres of gnatcatcher habitat, and 5.1 acres of SBKR habitat.

Agriculture—The continued operations and maintenance of existing citrus groves and a small recharge demonstration project area at the EVWD headquarters. Operation of the groves requires maintenance of access roads and irrigation infrastructure, including a sampling well, application of herbicide, insecticide, fungicide and fertilizer as needed. Vertebrate pests of the citrus groves are also managed using procedures designed to avoid impacts on sensitive vertebrate species in adjoining areas. The Task Force member associated with these activities is EVWD. Grove maintenance activities are expected to result in 0.1 acre of temporary impacts to SBKR habitat.

Habitat Management and Monitoring—Activities that support the restoration and maintenance of habitat values in the Plan Area. The conservation and mitigation strategy discussed within the HCP is designed to mitigate incidental take (for wildlife) or adverse impacts (for plants) of covered species from Covered Activities within the Plan Area and to manage and monitor those species in the future. However, implementation of some conservation and mitigation actions may result in low levels of incidental take and therefore, are being addressed in this HCP as Covered Activities. The Task Force member associated with these activities is the Conservation District. Activities related to implementation of the conservation and mitigation strategy that may result in take may include the following:

- Habitat enhancement, restoration, and creation.
- Operational changes to enhance in-stream habitat.
- Control of invasive plant species (e.g., mowing, grazing, herbicide application, prescribed fire and hand clearing).
- Relocation of Covered Species from impact sites to the HCP Preserve (e.g., in cases where impacts are unavoidable and relocation has a high likelihood of success).
- Monitoring activities in the Plan Area and mitigation areas.
- Species surveys and research.
- Vegetation thinning using livestock grazing, manual labor, herbicide application, or prescribed burning.
- Fire management including prescribed burning, mowing, and establishment of temporary fuel breaks.

Take Authorization for Activities on Federal Lands

For HCP-related activities that occur on federal lands, such as groundwater recharge basin construction, aggregate mining, management and monitoring, and O&M activities on BLM lands, exemption for any associated incidental take will be provided through a formal Section 7 consultation on the proposed land

exchange between the BLM and the Conservation District or through other future formal consultation. The HCP includes an analysis of HCP associated activities on federal land in the Plan Area and provides mitigation for them in the form of permanent conservation and management and avoidance and minimization measures. The impacts analysis and mitigation provided in the HCP will be incorporated into the Section 7 consultation. A conservation program will be implemented by the Conservation District, the Participating Entities, and SBCFCD for SBKR, gnatcatcher, woolly-star, spineflower and cactus wren in the Plan Area to avoid, minimize, and mitigate the effect of incidental take (for wildlife) or adverse impacts (for plants) and contribute to their survival and recovery. The HCP outlines the biological goals and objectives of the HCP conservation program, followed by the conservation, management, and monitoring actions that will be implemented under the HCP to achieve the biological goals and objectives. For more detailed description of the conservation, management, and monitoring, refer to the HCP.

Covered Species

Covered species are species for which incidental take would be authorized and conservation and management of lands would occur and includes slender-horned spineflower, Santa Ana River woolly-star, cactus wren, Coastal California gnatcatcher, and San Bernardino kangaroo rat.

Habitat Conservation

A primary conservation measure in the proposed HCP is the conservation of natural communities which are occupied by or are suitable habitat for the Covered Species. These communities also support Other Special Status Species known or with the potential to occur in the Plan Area. Table 2.0-2 summarizes the acres of conserved natural communities. The HCP will also conserve 156.3 acres of non-native grassland which may also be utilized by SBKR and some of the Other Special Status Species.

Table 2.0-2: Summary of Conserved Natural Communities

Conserved Natural Community	District Conserved Lands	SBCFCD Conserved Lands	District Managed Lands	HCP Preserve Total
RAFSS– Pioneer	119.9	87	35.9	*242.7*
RAFSS– Intermediate	230.6	74.9	236.8	*542.3*
RAFSS– Intermediate/Mature	160	7.9	316.5	*484.4*
RAFSS– Mature	127	9	57.3	*232.6*
RAFSS– Mature/Non-Native Grassland	27.8	0	0	*27.8*
Subtotal:	665.3	178.8	646.5	*1529.8*
Chamise Chaparral	39.3	0	0	*39.3*
Total Acreage:	*704.6*	*178.8*	*646.5*	*1,569.1*

Refer to HCP Section 5.1.2 for a summary of habitat- and species-specific biological objectives that have been developed to implement the conservation strategy and the actions (referred to as conservation measures) that will help achieve the objectives.

Habitat restoration and enhancement would generate temporary disturbances; these activities could involve soil disturbance, removal of undesirable plants and limited grading. All habitat restoration and enhancement is expected to result in a net long-term benefit for Covered Species and vegetation communities. However, these activities might have temporary or short-term adverse effects and might result in limited take of Covered Species.

Impact acreages related to habitat management and monitoring were calculated in Table 4-7, Potential Permanent Impacts of Individual Covered Activities on Covered Species and Table 4-8, Potential Temporary Impacts of Individual Covered Activities on Covered Species in the HCP. Permanent and temporary impacts to spineflower habitat, woolly-star habitat, gnatcatcher habitat and SBKR habitat are minimal and fall within the rounding to 0 acres as noted in the HCP.

Avoidance and Minimization Measures

Avoidance and Minimization Measures are designed to avoid or minimize the take of covered species and to reduce impacts on natural communities, covered species populations, and species habitats (including designated critical habitat). These measures include avoidance of species occurrences and habitat through project design; timing of construction activities in the vicinity of occupied habitat to avoid times when a covered species is present; and avoidance of habitat removal during breeding periods. Alterations to construction plans or activities may also avoid or minimize the potential for take by reducing effects on covered and other native species.

Table 2.0-3 lists a summary of avoidance and minimization measures that were developed to avoid and minimize temporary or short-term adverse effects of Covered Activities on the Plan Area.

Table 2.0-3 Avoidance and Minimization Measures[6]

Slender-horned Spineflower
Project footprint for Covered Activities whose final location has not been determined will avoid impact to occupied spineflower habitat.
Prior to ground disturbance in suitable spineflower habitat, surveys for spineflower will be conducted.
If spineflower are detected, seeds will be collected for 4 years prior to permanent impact ground disturbance.
If spineflowers are present, surface soils and cryptogamic crusts will be removed and sequestered prior to ground disturbance. The area will be replanted with stockpiled soils and crusts after disturbance.
The replanting will be monitored and maintained until the spineflower is considered to be re-established.
No Covered Activities are permitted in the contingency parcel until the objectives for new spineflower patches have been met.
Covered Activities occurring within 50m of known occurrences will have a temporary fence erected to protect the spineflower.
Santa Ana River Woolly-star
New construction projects in occupied woolly-star habitat will be avoided if feasible or mitigated if avoidance is not feasible.
Prior to ground disturbance in potentially suitable habitat, surveys will be conducted.
If woolly-star is detected, seeds will be collected prior to ground disturbance.
Temporary impact sites will be replanted with the previously collected woolly-star seed over consecutive years.
The replanting site will be monitored and maintained until the woolly-star is considered to be re-established.
Covered Activities within 50m of known occurrences will have a temporary fence erected to protect the woolly-star.
San Bernardino Kangaroo Rat
New construction in medium or high-quality habitat for SBKR will be avoided if feasible or mitigated if avoidance is not feasible.
Covered Activity disturbances will be confined to the smallest practical area.
Impacted areas that contain native vegetation will be restored after the project is completed.
Equipment will be cleaned prior to entering the worksite and between worksites.
No open trenches will be left overnight without covering, fencing, or provision of escape ramps.
Soil temporarily stockpiled in or adjacent to low, medium, or high quality SBKR habitat will be fenced to exclude SBKR and removed within 45 days after construction.
An integrated weed management plan will be developed and implemented.
Adequate fire suppression capability will be maintained in active construction areas.
No firearms or pets will be allowed in the work areas.
Litter control measures will be implemented.
Dust emissions will be controlled according to a Fugitive Dust Control Plan to comply with the South Coast Regional Air Quality Management District Rule 403.
Except where posted, vehicle speeds will not exceed 15 mph during the day and 10 mph at night.
Covered Activities will take place during the daylight hours to the extent feasible. If nighttime work occurs, lighting will be shielded away from the HCP Preserve.
Covered Activities that generate noise in excess of 60 dBA Leq hourly will incorporate methods to minimize the effects of noise on the HCP Preserve.
Any landscaping will be reviewed and approved by the Preserve Manager.

[6] Explained in more detail in HCP Chapter 5, Conservation Program

Phasing of the HCP

The HCP will be implemented in two phases linked to the BLM land exchange. The phasing of the conservation and impacts is outlined in Table 2.0-4 and depicted in Figure 2.0-2. Additional description of the phasing can be found in Chapter 5.2 of the HCP.

Table 2.0-4: Phasing of the HCP

Phase	HCP Preserve	Conservation	Impacts of Covered Activities
Phase 1 Pre-BLM Land Exchange	**Total Phase 1 Conservation - 1,171.0 acres** District Conserved - 482.8 acres SBCFCD Conserved - 185.7 acres District Managed – 502.5 acres	Land dedication of all HCP Preserve areas identified as District Conserved Lands, that are not part of the BLM Land Exchange Management and monitoring of all District Conserved Lands that are not part of the BLM land exchange Management and monitoring of all District Managed Lands that are not part of the BLM land exchange	Mining identified for Phase 1 – 201.3 acres Construction of all non-mining Covered Activities Ongoing operations and maintenance
Phase 2 Post-BLM Land Exchange	**Total Phase 2 Conservation – 488.4 acres** District Conserved – 294.8 acres District Managed – 193.6 acres	Completion of BLM land transfer[7] Dedication of all District Conserved Lands obtained by the Conservation District in the BLM land exchange Management and monitoring of all District Managed Lands and District Conserved Lands acquired by BLM in the land exchange Ongoing management and monitoring of the whole HCP Preserve	Mining identified for Phase 2 – 200.2 acres Ongoing operations and maintenance

2.4 ALTERNATIVE C: 2008 LAND MANAGEMENT PLAN

Alternative C, the 2008 Land Management Plan[8], was prepared by the Conservation District to describe the comprehensive land management strategy for the Plan Area. The 2008 Land Management Plan outlined a plan for how to coordinate and manage the present and future activities in the Wash and balance the ground-disturbing activities of aggregate mining, recreation, water conservation and other public services with preservation of quality, natural habitat for endangered, threatened, and sensitive species. Under this alternative, the District would prepare an HCP based upon the 2008 Management Plan and submit it the Service requesting a 50-year ITP for the covered species.

[7] BLM will maintain current administrative measures to manage the lands for conservation, and the Permittee will continue to work with BLM to ensure that habitat values are not degraded prior to the transfer (e.g., continuing patrol and controlling unauthorized access and use.

[8] The full name of the plan is the Upper Santa Ana River Wash Land Management and Habitat Conservation Plan Document.

Summary of 2008 Land Management Plan

As outlined in Section 2.0 Introduction of the 2008 Land Management Plan, the purpose of the Land Management Plan was to allow the continued use of land and mineral resources while maintaining the biological and hydrological resources of the planning area in an environmentally sensitive manner. The Land Management Plan was intended to coordinate and manage the present and future activities in the plan area, which are part of multiple jurisdictions, each with different needs. The goal was to balance the ground disturbing activities of aggregate mining, recreational activities, water conservation, and other public services with quality, natural habitat for endangered, threatened, and sensitive species.

Objectives of the Land Management Plan were:

- Ensure the continued ability of the Conservation 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 Flood Control 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 in the planning area and prevent colonization by non-native plants and animals, as mitigation for impacts from 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 the 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 Land Use Management Plan contained nine components including the activities, by category, which would have resulted in impacts to listed species and proposed habitat conservation to address impacts to those species. The nine components are:

1. Continued water conservation operations and maintenance activities of the Conservation District within the planning area, and designation of area for, and environmental mitigation for, potential future groundwater recharge facilities within the area designated for “Water Conservation” and accepted as a joint use by BLM in a portion of the Habitat Conservation area of the plan;

2. Continued Flood Control operations and maintenance activities within the planning area, and streams adjacent to or leading into the planning area, Mill Creek, Plunge Creek, and City Creek;

3. Continued water production operations and maintenance activities of EVWD and RMUD in the planning area;

4. Aggregate mining activities of Robertson's and Cemex, on the areas designated in the plan for mining, including construction of aggregate vehicle haul road, an access road from the mining area to 5th Street in Highland, and reclamation of the mine pits at the end of mining operations;

5. Adoption of General Plan Amendments by the City of Highland for land use amendments and One change and by the Cities of Highland and Redlands for trails plan and habitat conservation plans and granting of a recreational trail right-of-way easements from the Conservation District to the Cities of Highland and Redlands;

6. Designation of, and environmental mitigation for, expanded roadway rights-of-way on Alabama Street and Orange Street-Boulder Avenue widening, straightening, and realignment of Greenspot Road, and designation of right-of-way for a new Greenspot Road Bridge.

7. Designation of rights-of-way for and management of recreational trails in the planning area;

8. A land exchange between the Conservation District and BLM; and

9. A land exchange between Flood Control and Robertson's.

The Conservation District prepared an EIR for the 2008 Land Management Plan and it was certified by the Conservation District's Board on November 12, 2008. A Draft EIS was prepared by BLM for the proposed land exchange between the Conservation District and BLM and a Notice of Availability was posted in the Federal Register on July 24, 2009. However, a final EIS for the proposed land exchange was not completed.

Comparison of 2008 Land Management Plan and 2019 HCP

As with Alternative B, the Proposed Action, the 2008 Land Management Plan addressed four federally listed species, the endangered San Bernardino kangaroo rat (*Dipodomys merriami parvus*), Santa Ana River woolly-star (*Eriastrum densifolium ssp. sanctorum*), and slender horned spineflower (*Dodecahema leptoceras*), and the threatened coastal California gnatcatcher (*Polioptila californica californica*). Unlike the Alternative B, it did not provide for conservation of the cactus wren.

Alternative C would conserve fewer known locations of woolly-star and spineflower and less gnatcatcher and SBKR habitat. Table 2.0-5 below, provides a comparison of species conservation between the two alternatives.

A Habitat Enhancement Plan (HEP) was part of the 2008 Land Management Plan proposed alternative (FEIR Chapter 4.4, Mitigation Measures). While lacking in specifics, the 2008 Land Management Plan

states that it would maintain adequate habitat for the four federally listed species and that there would be surveys for and eradication of exotic plant.

Table 2.0-5: Comparison of Covered Species Conservation between the Alternatives

Species	Alternative B Proposed Action/Projects	Alternative C 2008 Land Management Plan	Increase by Unit	Percent Increase	Unit
Slender-horned spineflower	111	79	32	25%	occurrences[9]
Santa Ana River woolly-star					
Individuals	612	509	103	14%	grid cell[10]
1-25	773	612	161	18%	grid cell
25-50	261	213	48	16%	grid cell
>50	180	163	17	8%	grid cell
Total	1826	1497	329	15%	grid cell
San Bernardino kangaroo rat					
Habitat Quality					
High	380	318	61	15%	acres
Medium	383	285	98	21%	acres
Low	497	322	175	27%	acres
Total	1260	925	335	22%	acres
Coastal California gnatcatcher					
Habitat Quality					
High	66	56	10	12%	acres
Medium	226	153	72	24%	acres
Low	1104	837	267	14%	acres
Total	1396	1046	350	15%	acres

It also states that a minimum of 1,496 acres of RAFSS, the preferred habitat for SBKR, would be maintained (in a combination of all seral stages and combinations with non-native grassland), a decline of 10 percent from the estimated 1,662 acres of RAFSS estimated to be present. The 2008 Plan also provides specific acreages for the amount of RAFSS which would be maintained along the Santa Ana River and for intermediate and intermediate/mature RAFSS. It does not provide specifics as to how the habitat would be maintained.

If adopted, the 2008 Land Management Plan alternative would conserve approximately 312 fewer acres of habitat than would be conserved by implementation of the 2019 HCP under Alternative B, and it would result in approximately 88 more acres of permanent impacts than the 2019 HCP. A comparison of the permanent impacts from proposed activities and the proposed conservation for each of the two alternatives can be found in Table 2.0-6 below.

[9] Includes historic and current locations of spineflower.

[10] A comprehensive survey of woolly-star was conducted in the Plan Area by dividing it up into grid cells and sampling them.

Table 2.0-6: Comparison of Permanent Impacts between the Alternatives

Land Use Type	Alternative C - 2008 Management Plan (acres)	Alternative B - 2019 HCP (acres)
New Groundwater Recharge Basins	238	150
New Mining	434	402
Transportation	47	35
Trails	0	9
Flood Control	0	18
Wells and Water Infrastructure	0	17
Total of Permanent Impacts:	**719**	**631**
District Conserved	673	963
District Managed	670	696
Total Conservation:	**1,347**	**1,659**

Adoption of the 2008 Land Management Plan would allow mining of an area containing spineflower (after relocation of the plants) between two existing mining pits with no contingency. Development of this area in the 2019 HCP is contingent upon the establishment of six new spineflower areas within the Preserve.

2.5 ALTERNATIVES CONSIDERED BUT REJECTED

In the 2008 EIR, alternatives involving BLM's SCRMP Amendment and the BLM's acquisition of other lands, increased acreage, or disposal of reduced acreage were not considered for analysis because they do not meet the purpose and need described in Section 1.3, *Purpose* and Section 1.4, *Need*. With the congressional authorization of the Wash Plan Land Exchange Act other BLM-related alternative are no longer relevant. Two alternatives that were eliminated from further analysis are summarized below.

2.5.1 COMPLETE AVOIDANCE OF TAKE

Under this alternative, activities in the Plan Area would be conducted to avoid take of SBKR, gnatcatcher, woolly star, and spineflower. Because of the widespread distribution of SBKR and woolly star within the Plan Area, complete avoidance of take of all listed species would require substantial changes to existing and future O&M activities and to the design and implementation of planned projects in the Plan Area by all of the proposed covered parties. The impracticality of this alternative was the trigger for preparation of this HCP. The alternative was rejected in favor of reconciling land use and species/habitat conservation goals for the Plan Area and seeking authorization for incidental take.

2.5.2 NO ADVERSE IMPACTS TO SLENDER-HORNED SPINEFLOWER

Of the five proposed covered species in the HCP, the slender-horned spineflower is the most at risk. The Plan Area is one of only eight known remaining locations for this narrowly distributed endemic plant species and one of only two locations in San Bernardino County. Further, the cryptic nature of this plant and lack of information about why it occurs in certain areas make conservation planning or effective mitigation for impacts difficult. Excluding spineflower from the list of species covered by the plan and coverage for adverse effects was considered in the early stages of the HCP preparation, but was rejected

in favor of the approach developed in cooperation with the USFWS and CDFW. That approach makes Covered Activity-related adverse effects to spineflower contingent on the successful development of a habitat enhancement program for spineflower in the Plan Area as part of the HCP implementation. Because of the known and potential occurrence of spineflower on lands that would be managed under the HCP, development of the enhancement program has the potential to directly contribute to the recovery of this species. In that context, the species would tolerate some adverse effects, but the effects would not reduce the likelihood of its survival and recovery.

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