



Initial Study

Plunge Creek Conservation Project
San Bernardino County, California

Prepared for:

San Bernardino Valley Water Conservation District
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SECTION 1 - INTRODUCTION

Background

The roots of the San Bernardino Valley Water Conservation District (SBVWCD) stem back to 1909. It was originally formed as a private Water Conservation Association to conserve the water of the Santa Ana River by storing it in the underlying groundwater basin for future use. Early water conservation was accomplished by installing and/or completing a series of percolation ponds, canals, and weirs. Local landowners galvanized the voters into action who prompted the San Bernardino County Board of Supervisors to form the San Bernardino Valley Water Conservation District (SBVWCD) as a public agency to protect against excessive export of the local surface water by downstream agencies. The current District was created in 1932 by a vote of citizens to obtain water for conservation purposes as a special purpose District. Shortly thereafter, the Water Conservation Association dissolved, and all land and water property were transferred to the SBVWCD. The SBVWCD has fee ownership, water recharge easements, and/or permitted use on more than 3,650 acres. The Water Conservation Act of 1931 provided broad authority to exercise a variety of powers necessary to further the SBVWCD's primary goal of conserving water, such as making contracts, acquiring property through eminent domain, owning and operating recreational facilities, owning and operating hydroelectric plants, and intervening in the actions of other agencies when those actions interfere with the natural flow of streams that would otherwise be conserved for beneficial use. The SBVWCD is organized under Division 21 of the California Water Code, and regulated by Sections 74000 to 76501.

Starting in 1993, the SBVWCD and several other private and public interests formed a committee to develop a plan on how best to manage the Santa Ana River watershed, including its tributaries, for purposes of mining, flood control, water conservation, and habitat management (*Upper Santa Ana River Wash Land Management and Habitat Conservation Plan Document* [Wash Plan]). An Environmental Impact Report was prepared to address the environmental impacts of the strategies identified in the Wash Plan (LSA, November 2008) and is in the process of being adopted by the parties. In December 2017, the *Upper Santa Ana River Wash Habitat Conservation Plan* (Wash Plan HCP) was prepared as part of the permit application submitted by the SBVWCD to the U.S. Fish and Wildlife Service (USFWS) on behalf of the parties that will implement the Wash Plan. Under the HCP, the SBVWCD will have primary responsibility for HCP implementation, with contributions by Flood Control, and other Wash Plan/Wash Plan HCP participating entities, and support from USFWS and CDFW for review of annual reports, and participation in the Preserve Management Committee.

To generate sufficient conservation to accommodate Covered Activities early in the HCP implementation, the SBVWCD will initiate "Jump Start" conservation activities in Years 1-3 of implementation. These Jump Start activities will ensure that a significant initial contribution to the conservation component of the HCP will be made early in the life of the permit and that conservation can stay ahead of impacts by at least 5 percent. One of the activities identified in the HCP as being part of the "Jump Start" program is: *Enhance the quality of the linkage between the Santa River and Plunge Creek, consisting of the 1938 and 1969 flood channels created by the Santa Ana River (breakout area), by controlling non-native annual grasses and other invasive vegetation within the linkage and corridor margins, adding a crossing for SBKR of the "D-Dike," and thinning shrubs if necessary.* Specifically, the project is identified in the Wash Plan HCP, as the *Plunge Creek Habitat Enhancement (CD.06)*, (ICF, December 2016). The Project is located within Plunge Creek within the Santa Ana Wash area, in the City of Highland (Figure 1).

The proposed Project includes sediment removal and relocation, channel scouring, and installation of water splitters. The Project is designed to restore historic channels and increase natural recharge of water from Plunge Creek. The sediment removal would consist of heavy machinery removing cobbles, sands, and other fine

sediments deposited in historic floods that are currently blocking old channels. The sediment removed during this part of the project would be used to reinforce an existing berm that would further protect an existing mining operation from flooding during the scouring events that would occur in the newly restored channel. All sediment for this wall would be sourced locally. The proposed splitters would exist to assist in directing flow, allowing for control over which channels received the scouring flow and enabling water resource controllers to keep the active Plunge Creek channels in their current state as well (Figure 2). The Project will occur over approximately 1.7 miles of Plunge Creek and will impact eight (8) acres temporarily and 5.9 acres permanently (Figure 3). Of these impacts, 0.61 acre permanent and 0.63 acre temporary impacts will be subject to Sections 404 and 401 of the Clean Water Act (CWA) and Section 1600 of the California Fish and Game Code (FGC).

The U.S. Army Corps of Engineers (Corps) will complete the federal National Environmental Policy Act (NEPA) compliance documentation, as well as issue the CWA 404 permit. The SBVWCD is responsible for completing the environmental studies required under CEQA and obtaining permits from the State regulatory agencies such as the Regional Water Quality Control Board (RWQCB) and California Department of Fish and Wildlife (CDFW).

SECTION 2 – REGULATORY FRAMEWORK

The SBVWCD has identified that The Plunge Creek Conservation Project meets the California Environmental Quality Act (CEQA) Guidelines Section 15378 definition of a Project. CEQA Guidelines Section 15378 defines a Project as the following:

- (a) "Project" means the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.

In accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Sections 21000-21177), this Initial Study has been prepared to determine potentially significant impacts upon the environment resulting from the construction, operation and maintenance of The Plunge Creek Conservation Project (hereinafter referred to as the "Project" or "proposed Project"). In accordance with Section 15063 of the State *CEQA Guidelines*, this Initial Study is a preliminary analysis prepared by the SBVWCD as Lead Agency to inform the Lead Agency decision makers, other affected agencies, and the public of potential environmental impacts associated with the implementation of the proposed Project.

Organization of the Initial Study

The Initial Study is organized as follows:

Introduction: Provides the regulatory context for the review along a brief summary of the CEQA process.

Project Information: Provides fundamental Project information, such as the Project description, Project location and figures.

Lead Agency Determination: Identifies environmental factors potentially affected by the Project and identifies the Lead Agency's determination based on the initial evaluation.

Mitigated Negative Declaration: Prepared when a determination can be made that no significant environmental effects will occur because revisions to the Project have been made or mitigation measures will be implemented which will reduce all potentially significant impacts to less than significant levels.

Mitigation Measures: Identifies objectives, criteria, and specific procedures to administer the SBVWCD's responsibilities under CEQA.

Evaluating Environmental Impacts: Provides the parameters the SBVWCD uses when determining level of impact.

CEQA Checklist: Provides an environmental checklist and accompanying analysis for responding to checklist questions.

References: Includes a list of references and various resources utilized in preparing the analysis.

SECTION 3 - DETAILED PROJECT DESCRIPTION

The proposed Project consists of the restoration of historic flows to the floodplains of Plunge Creek through the installation of water splitters within the primary channel and the excavation of pilot channels within the historic floodplain. The Project is specifically identified in the *Upper Santa Ana River Wash Habitat Conservation Plan*, as *Plunge Creek Habitat Enhancement (CD.06)*, (ICF, November 2016).

The Project is located south-southwest of the San Bernardino National Forest inside the Santa Ana River (SAR) floodplain, south of Greenspot Road, in the City of Highland, San Bernardino County, California (Figure 1). The proposed Project will consist of several splitters and some cut channels installed along Plunge Creek. In its entirety, Project facilities will extend over a distance of approximately one mile along the middle section of Plunge Creek, beginning one-third of a mile south of the Greenspot road crossing to a point approximately half a mile from Orange Street (Figure 2). Abbey Way runs north of the project site and would serve as the access road to the project.

The project area is located within approximately 203 acres along a section of Plunge Creek Wash where native habitat and historical floodplain exists. The native habitat here is degraded, which is in part due to artificial channelization Plunge Creek. The flood control levees, bridge crossings and pipeline crossings limit the natural lateral movement and braiding of the channel flows. Artificial channelization, however, increases the flow conveyance capacity of the channel and as such, larger flood events are required to overtop the primary channel banks. Many remnant channels exist in the proposed project area that are hydrologically disconnected from the confined primary channel and rarely, if ever, receive flood flows under current conditions. The decline in secondary flow paths and lateral migration diminishes the erosion, sediment transport, and sediment deposition that historically created conditions suitable for early stage Riversidean alluvial fan sage scrub (RAFSS) communities, the preferred native habitat of the federally-listed San Bernardino Kangaroo Rat (SBKR) (*Dipodomys merriami parvus*).

The design goal of the project is to create hydrologic conditions that will enable natural fluvial processes to reoccupy historic floodplains and remnant distributary channels. The hydraulic conditions must be sufficient to flush silt away from underlying sand, and to scour away non-native grasses, as well as deposit sand substrate to enable growth and establishment of native floodplain and alluvial fan habitats. Through the achievement of the design goal, the ecological goals of the project are to re-establish of pioneer RAFSS habitat which, in turn, is expected to expand suitable habitat for the SBKR. The result would be a more complex channel morphology with a network of distributary channels, expanded suitable habitat for SBKR, and enhanced groundwater recharge (ICF, April 2016)

Construction Methods

Specifically, the proposed project consists of the excavation of two pilot channels from the active channel of Plunge Creek, through the historic floodplain, and back to the active channel. These design elements would enable flood flows to be conveyed onto the historic floodplain and into the remnant channels currently separated from the main channel by high elevation terrace topography. The pilot channels are envisioned not to be heavily engineered features, and their dimensions would initially be much smaller than the existing active channel (average 2 to 3-foot-depth and 10-foot-wide channel bottoms). Over time, the pilot channels would naturally enlarge through fluvial scour. The upper pilot channel would be approximately 3,600 feet long and would re-converge with the active Plunge Creek channel immediately downstream of the Weaver Street Drain. The lower pilot channel would begin approximately 500 linear feet downstream of the point where the upper pilot channel re-converges with the main channel, and would be approximately 4,200 feet long, and also includes an additional 600-foot-long south branch. Native substrate derived from pilot channel excavation, conservatively estimated at 8,900 cubic yards, would be repurposed for additional project elements (ICF, April 2016).

An excavator would be used to excavate a channel with a 10-foot bottom width. The banks would be excavated at a side slope of 1.5H:1V and match the topography until positive drainage can be achieved. The resultant height of the bank would vary depending on existing ground elevations, but are typically 2-3 feet tall through most of the pilot channel sections. Bank heights up to 7 feet high would be constructed in the upper portion of the upstream pilot channel since relatively deep excavation is needed to cut through the high terrace elevations prior to connecting with the lower elevation remnant channel features. Side slopes steeper than 1.5:1, but no steeper than 1:1, may be used where the cut depth is less than 3 feet and the cut slope is stable. The 10-foot bottom width accommodates the width needed for equipment to both excavate and dump trucks to travel within the pilot channels as part of the haul road system to dispose of fill material. Since the side slopes are set at the approximate angle of repose of the coarse, unconsolidated material, as the channel is excavated material will slough into the channel and the final bank side slope will largely be achieved without the need for fine-grading. This sloughed material can immediately be transported to the fill disposal areas (ICF, April 2016).

The gradient of the pilot channels also considers several factors. Near the entrance with the existing Plunge Creek channel, the pilot channels need to be relatively steep to draw water in and maintain sediment transport continuity, otherwise backwatering and sedimentation in the pilot channel could occur and they could potentially become plugged with sediment and no longer function. The gradient also considers the existing ground topography. If constructed too steep the pilot channel will drop down in elevation too far below the existing ground, making it too deep and also adding additional excavation work. Similarly, the pilot channels need to tie into the fixed elevations of the remnant channel features on the floodplain. The proposed longitudinal bed elevation profiles of the upper pilot channel that starts just downstream of the MWD pipeline are displayed in Figure 3. This pilot channel gradient typically varies from 1.5 percent to 1.75 percent (ICF, April 2016).

In addition to the excavation of pilot channels, the proposed project includes the following elements:

- Installation of flow deflectors (“splitter mounds”), composed of large, native boulders (Type 1 splitter) and large, native boulders combined with logs with intact root wads (Type 2 splitter). The splitter mounds would be located at the heads of the two pilot channels and at three additional locations in the floodplain portion of the lower pilot channel. Native boulders would be sourced from the excavated pilot channels and adjacent terraces.
- Construction of a native rock sills at the heads of the two pilot channels to create roughness and resist channel bed degradation within the active channel.

- Construction of an approximately 4-foot-high berm along the northern (upstream) boundary of an existing quarry located adjacent to the proposed upper pilot channel using compacted native material derived from the pilot channel excavation, in order to prevent redirected flows from entering the quarry.
- Construction of temporary access routes across floodplain areas and in the existing primary channel. Additional access routes would consist of existing access roads as well as traveling through the constructed pilot channels.
- Adaptive management (maintenance) of splitter mounds and pilot channels may be necessary following the first series of larger storm events.

Construction Route

Construction equipment will travel primarily east on Abbey Way, where it dead ends onto an unpaved road that will serve as the main access to points in the wash that provide a natural pathway to the main channel of Plunge Creek and the various historic braids. The site is located approximately 780 feet south of Abbey Way.

Equipment and Material Staging

The following is a list of general equipment that could typically be used for construction. The estimated equipment listed here is meant to give enough detail for the purpose of environmental analysis, and is not designed to identify the exact make and models or to limit contractors to this specific list.

- Track mounted hydraulic excavators
- Wheel mounted front end loaders
- Back hoe
- Bull dozer
- Haul trucks

Personnel

Number of construction personnel will vary based on the work for the project that is completed that day. It is anticipated that the Project will utilize five employees daily over the one-month construction period.

Construction Timing

The work is estimated to last approximately one month. Work would likely occur between 7 am and 4 pm on Mondays through Fridays during the dry seasons, typically considered the months of August through September.

Hazardous Waste

It is assumed that the equipment will need fuel and servicing. The following types of wastes are considered hazardous: petroleum products, palliatives, and solvents to service the heavy equipment. There may be additional wastes on the site that are considered hazardous. It is assumed that the operations will be in compliance with the requirements set forth by the Hazardous Materials Division of the San Bernardino County Fire Department and the US EPA.

It is assumed that lubricants and fuel will be handled in the construction staging area whenever possible. The staging area would be located on the paved road near the wash access, which easily accessible from the construction site.

Construction Avoidance and Minimization Measures

Sediment Control

According to *Upper Santa Ana River Wash Plan HCP* (ICF, December 2016), Section 5.5, the following water quality minimization measures will be implemented.

- Construction activity and access roads will be minimized to the extent practicable in all drainages, streams, pools, or other features that could be under the jurisdiction of the USACE, State Water Board, and/or CDFW. If impacts on these features are identified, a formal jurisdictional delineation and permit applications to the regulatory agencies may be required.
- When stream flows must be diverted, the diversions will be conducted using sandbags or other methods requiring minimal instream impacts. Silt fencing or other sediment trapping materials will be installed at the downstream end of construction activity to minimize the transport of sediments off site. Settling ponds where sediment is collected will be cleaned out in a manner that prevents the sediment from reentering the stream. Care will be exercised when removing silt fences, as feasible, to prevent debris or sediment from returning to the stream.
- Erodible fill material will not be deposited into water courses. Brush, loose soils, or other similar debris material will not be stockpiled within the stream channel or on its banks.
- Covered Activities near to or within the HCP Preserve or other natural areas will incorporate plans to ensure that runoff discharged is not altered in an adverse way when compared with existing conditions, which includes landscape irrigation. Stormwater systems will be designed to prevent the release of sediments, toxins, chemicals, petroleum products, exotic plant materials, or other elements that might degrade or harm biological resources or ecosystem processes within the HCP Preserve.

Species Protection

The following excerpt from Section 5 of the *Upper Santa Ana River Wash Plan HCP* (ICF, December 2016) identifies species protection measures that will be implemented as part of The Plunge Creek Conservation Project.

Slender-horned Spineflower

- Covered Activities that will result in permanent impacts where the location has not yet been determined (e.g., new wells) will avoid occupied spineflower habitat. An exception can be made upon approval of the Wildlife Agencies if the Permittee or Participating Entity can demonstrate that (1) no alternative sites were feasible, (2) the impact will not result in the loss or compromise of the entire spineflower patch, and (3) the loss of plants will be fully mitigated.
- Prior to ground disturbance from Covered Activities in suitable spineflower habitat, surveys will be conducted if the area has not been surveyed within the last 5 years to determine if the plant is present. Surveys will be conducted in accordance with the CDFW protocols for surveying Special Status plant populations.

- If spineflower are detected during pre-project surveys, seeds will be collected for 4 years prior to ground disturbance. Seed collection and storage will be by an entity which has a Memorandum of Understanding with the USFWS to process and handle the seeds of endangered plant taxa.
- Surface soils will be removed and sequestered at the beginning of any ground disturbing construction or O&M activity where spineflower is present. If cryptogamic soil crust is also present, it will be harvested in blocks, preserved, and placed back on the site after construction. If the impacts are permanent, an alternate site in suitable habitat will be selected in consultation with a qualified botanist or restoration biologist. After the sequestered soil is returned to the site, it will be replanted with the previously collected spineflower seed over consecutive years following the ground disturbance. The timing and methods of planting will be determined by the Permittee in consultation with a restoration biologist and will incorporate adaptive management.
- The replanting site will be monitored and maintained (e.g., weed control) for 5 years or until the spineflower is considered to be re-established to target values established by the Preserve Management Committee. Maintenance weeding will continue after the restoration weeding as part of the annual maintenance program.
- No aggregate mining or other Covered Activities will be permitted in the spineflower contingency parcel (Section 11 between the existing quarries) until it has been determined the biological objective for establishing new, persistent spineflower patches (SHSF Objective 3) has been met. Upon meeting the performance standards in the objective, the Permittee will provide a report documenting success to the Wildlife Agencies for their review and approval. Upon approval of the report in writing, aggregate mining of the contingency parcel can commence.
- When Covered Activities will take place within 50 meters of known occurrences of spineflower, a temporary fence will be erected to protect them. A qualified botanist and/or biological monitor will monitor construction activities, maintain the markers limiting construction, and maintain the fence protecting the spineflower to prevent accidental disturbance.

Santa Ana River Woolly-star

- New construction projects in occupied woolly-star habitat will be avoided if feasible. For projects where the exact location of the facility has not been determined the Permittee or Participating Entity must consider alternatives outside of occupied habitat. If an alternative in occupied habitat is selected, the Participating Entity must demonstrate to the Permittee and or Wildlife Agencies why it was not possible to locate the project in unoccupied habitat.
- Prior to ground disturbance from new construction and O&M activities in potentially suitable woollystar habitat, surveys will be conducted if the area has not been surveyed within the last 5 years to determine if the plant is present. Surveys will be conducted in accordance with the CDFW protocols for surveying Special Status plant populations.
- If woolly-star is detected during pre-project surveys, seeds will be collected at the appropriate time (usually fall) prior to ground disturbance. Seed collection and storage will be by an entity that has a Memorandum of Understanding with the USFWS to process and handle the seeds of endangered plant taxa. In areas of temporary impacts, the seed will be replanted in the temporarily disturbed area. The seed planting time and location for seeds collected from permanent impact areas will be at the discretion of the land manager. The cost of seed collection, up to 2 years of storage, and planting will be borne by the relevant Permittee or Participating Entity.
- Sites where temporary impacts occur will be replanted with the previously collected woolly-star seed over consecutive years following the ground disturbance. The timing and methods of planting will be determined by the Permittee in consultation with a qualified botanist or restoration biologist with woolly-star experience, and will incorporate adaptive management. If the impacts are permanent, an alternate site in suitable habitat will be selected by a qualified restoration biologist or botanist.

- The replanting site will be monitored and maintained (e.g., weed control) for 2 years or until the woolly-star is considered to be re-established to target values established by the HCP Preserve Management Committee. Maintenance weeding will continue after the restoration weeding as part of the annual maintenance program.
- When Covered Activities will take place within 50 meters of known occurrences of woolly-star, a temporary fence will be erected to protect them. A qualified botanist and/or biological monitor will monitor construction activities, maintain the markers limiting construction, and maintain the fence protecting the woolly-star, to prevent accidental disturbance.

San Bernardino Kangaroo Rat

- New construction in areas assessed as medium or high quality habitat for SBKR will be avoided if feasible. For projects where the exact location of the facility has not been determined the relevant Permittee or Participating Entity must consider alternatives outside of medium or high quality areas. If the selected alternative is in a medium or high quality area, the project proponent must demonstrate to the Permittee and the Wildlife Agencies why it could not be located in a lower quality habitat.
- If a ground-disturbing activity from new construction or O&M occurs in an area assessed as medium or high quality for SBKR, and is equal to or less than 3 acres, a temporary exclusionary fence meeting USFWS standards will be placed and maintained around the perimeter of the site. The area inside the fence will be trapped for SBKR by a qualified biologist during the 5 nights preceding the ground disturbance. Any trapped animals will be relocated to the nearest undisturbed habitat outside the construction area.
- When new construction or O&M activities with temporary ground disturbance occurs, including trenching, in SBKR habitat, the top 20 inches of soil/substrate will be segregated, preserved, and placed back in the same location and approximate configuration when the trench is backfilled. It will be compacted to within 5% of the average compaction of the natural substrate. If significant (over 30%) invasive weed cover is found, the topsoil will not be replaced in the top uncompacted fill but will be used for lower compacted backfill. In all cases the top 20 inches will be uncompacted and as suitable for SBKR burrowing as possible.
- For planned ground disturbance in areas assessed as medium or high-quality habitat for SBKR that are greater than 3 acres in size, the nearest suitable relocation site will be identified by a qualified biologist in consultation with the Permittee and the USFWS. The translocation site will typically be an area of trace or low-quality habitat with suitable substrate, which has recently been restored. Once the relocation site has been identified, exclusionary fencing will be erected, and the area inside the fence will be trapped by a qualified biologist during the 5 nights preceding construction. Temporary burrows will be constructed at the relocation site for relocated animals.
- Prior to grading dirt access roads, other than roads within mining operations areas, a qualified biologist will trap the road and 15 meters on either side during the 5 nights preceding the grading. Trapped animals will be held until the completion of grading and then returned to the location where they were trapped.
- A qualified biologist or biological monitor with SBKR expertise will be present when construction or ground-disturbing O&M activities that could result in take of SBKR occurs in, or within 100 meters of SBKR habitat which is classified as low, medium, or high habitat potential for SBKR.

Coastal California Gnatcatcher

- Covered Activities resulting in permanent impacts on gnatcatcher will be avoided if feasible. Where the exact location of the facility has not yet been determined (e.g., new wells) the relevant Permittee or Participating Entity must consider alternatives outside of occupied habitat. If an alternative in nesting habitat is selected, the Permittee or Participating Entity must demonstrate to the Permittee and or the Wildlife Agencies why it was not possible to

locate the project in non-nesting habitat. Participating Entities will provide information in their COI application substantiating a determination that locating their proposed project in non-nesting habitat was not possible.

- New construction and O&M activities will be avoided to the extent feasible during the gnatcatcher breeding season. If a Covered Activity resulting in significant vegetation disturbance takes place during the nesting season, February 15 to August 30, a qualified biologist will conduct pre-activity nest surveys. The area to be disturbed and a 500-foot buffer will be surveyed for 5 consecutive days to determine if gnatcatchers are nesting in or near the construction or operations and maintenance area. If gnatcatchers are nesting, a 300-foot buffer will be established and maintained between the Covered Activity and the nest area until nesting is completed. Noise within the buffer area will not exceed 60dB(A) Leq.

Migratory Birds

- If construction-related activities are to occur during the nesting season (February 1 through September 15), a qualified biologist will conduct a preconstruction survey of the proposed construction area and an appropriate buffer. This preconstruction survey will commence no more than 72 hours prior to the onset of construction. If an active nest is observed, an appropriate buffer will be established until nesting is completed.

Operations and Maintenance

It is anticipated that Operations and Maintenance will be required after heavy storm events.

The SBVWCD currently employs two field personnel who will regularly operate and maintain the splitters and channel flows to the design capacity. There are no plans to increase the number of operations field personnel due to construction of this project.

SECTION 4 - ENVIRONMENTAL CHECKLIST FORM

1. **Project Title:** The Plunge Creek Conservation Project
2. **Lead Agency Name:** San Bernardino Valley Water Conservation District
Address: 1630 W. Redlands Boulevard
Redlands, California 92373
3. **Contact Person:** Daniel Cozad, District Manager
San Bernardino Valley Water Conservation District
dcozad@sbywcd.org

Phone Number: (909) 793-2503
4. **Project Location:** City of Highland;
San Bernardino National Forest inside the Santa Ana River floodplain;
Just south of Greenspot Road and at the southwest corner of Abbey Way.
Topographic Quad (USGS 7.5''): Redlands
Topographic Quad Coordinates: northeast one-quarter of Section 21, Township
1 South, Range 3 West, Section 11
Latitude: 34.104969° N, Longitude: -117.158794° W
6. **General Plan Designation:** City of Highland, Agricultural/Equestrian Residential
7. **Zoning:** City of Highland, Agricultural/Equestrian Residential
8. **Project Description Summary:**

The proposed Project consists of the excavation of two pilot channels from the active channel of Plunge Creek, through the historic floodplain, and back to the active channel. The purpose of the project is habitat restoration and increased ground water recharge. The proposed Project includes sediment removal and relocation, channel scouring, and installation of water splitters. All elements from the project are derived directly from the channel material, placed in a manner to achieve the design results. The Project is specifically identified in the *Upper Santa Ana River Wash Habitat Conservation Plan*, as the *Plunge Creek Habitat Enhancement (CD.06)*, (ICF, December 2016).

The sediment removal would consist of heavy machinery removing cobbles, sands, and other fine sediments deposited in historic floods that are currently blocking old channels. The sediment removed during this part of the project would be used to reinforce a wall that would protect an existing mine from flooding due to the scouring events that would occur in the newly restored channel. All sediment for this wall would be sourced locally. The proposed splitters would exist to assist in directing flow, allowing for control over which channels received the scouring flow and enabling water resource controllers to keep the active Plunge Creek channels in their current state as well.

The project is designed to enable flood flows to be conveyed onto the historic floodplain and into the remnant channels currently separated from the main channel by high elevation terrace topography. The pilot channels are envisioned not to be heavily engineered features, and their dimensions would initially be much smaller than the existing active channel (average 2 to 3-foot-depth and 10-foot-wide channel bottoms). Over time, the pilot channels would naturally enlarge through fluvial scour. The upper pilot channel would be approximately 3,600

feet long and would re-converge with the active Plunge Creek channel immediately downstream of the Weaver Street Drain. The lower pilot channel would begin approximately 500 linear feet downstream of the point where the upper pilot channel re-converges with the main channel, and would be approximately 4,200 feet long, and also includes an additional 600-foot-long south branch. Native substrate derived from pilot channel excavation, conservatively estimated at 8,900 cubic yards, would be repurposed for additional project elements, discussed below.

In addition to the excavation of pilot channels, the proposed project includes the following elements:

- Installation of flow deflectors (“splitter mounds”), composed of large, native boulders (Type 1 splitter) and large, native boulders combined with logs with intact root wads (Type 2 splitter). The splitter mounds would be located at the heads of the two pilot channels and at three additional locations in the floodplain portion of the lower pilot channel. Native boulders would be sourced from the excavated pilot channels and adjacent terraces).
- Construction of a native rock sills at the heads of the two pilot channels to create roughness and resist channel bed degradation within the active channel.
- Construction of an approximately 4-foot-high berm along the northern (upstream) boundary of an existing quarry located adjacent to the proposed upper pilot channel using compacted native material derived from the pilot channel excavation, in order to prevent redirected flows from entering the quarry.
- Construction of temporary access routes across floodplain areas and in the existing primary channel. Additional access routes would consist of existing access roads and within the constructed pilot channels.
- Adaptive management (maintenance) of splitter mounds and pilot channels may be necessary following the first series of larger storm events.

Construction is anticipated to occur over one month during the drier months of the year, typically May through August, to reduce impacts to water and water quality.

Project details are described in Section 3. The Project is initiated as part of the Wash Plan, specifically: *Enhance the quality of the linkage between the Santa River and Plunge Creek, consisting of the 1938 and 1969 flood channels created by the Santa Ana River (breakout area), by controlling non-native annual grasses and other invasive vegetation within the linkage and corridor margins, adding a crossing for SBKR of the “D-Dike,” and thinning shrubs if necessary.* The Project is specifically identified in the *Upper Santa Ana River Wash Habitat Conservation Plan, as Plunge Creek Habitat Enhancement (CD.06)*, (ICF, November 2016).

10. Surrounding land uses and setting (Briefly describe the project’s surroundings)

The Project area is generally surrounded by vacant land with a well-defined graded maintenance road network, or land that is utilized for agriculture or mining. Some residences also exist to the north. More specifically:

North:	Plunge Creek floodplain; Abbey Way, residences and agriculture
South:	Existing mining operation
East:	Plunge Creek floodplain
West:	Elder Creek Flood Control Channel (San Bernardino County Flood Control District)

11. Lead Agency Discretionary Actions:

Discretionary actions that may be taken by the Lead Agency include, but are not limited to, the following:

- Award contract for project.

12. Other agencies whose approval is required (e.g., permits, financing approval, or participation agreement.):

- Work within City/County limits. The Project area is located entirely within the limits of the City of Highland, in San Bernardino County. However, because the SBVWCD is also a public agency, not subject to the City jurisdiction, no City permits are required.
- Construction Compliance – Stormwater Discharge. Construction projects that disturb 1 acre of land or more are required to obtain coverage under the NPDES General Permit for Construction Activities (General Construction Permit), which requires the applicant to file a notice of intent (NOI) to discharge stormwater and to prepare and implement a SWPPP. The SWPPP includes an overview of the Best Management Practices (BMPs) that would be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. The SBVWCD will prepare a SWPPP for the project.
- Alteration/Discharge into Streambeds – State Jurisdiction. The California Department of Fish and Wildlife (CDFW) is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the Fish and Game Code (Section 1602) requires an entity to notify CDFW of any proposed activity that may substantially modify a river, stream, or lake. The proposed Project will modify Plunge Creek, therefore, a Lake or Streambed Alteration Agreement from the CDFW is required. The Agreement will include reasonable conditions necessary to protect those resources. The Agreement must comply with CEQA. The entity may proceed with the activity in accordance with the final Agreement.
- Alteration/Discharge into Streambeds – Federal Jurisdiction. The federal Clean Water Act (CWA) is the primary federal law promulgated to protect the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The responsible regulating agencies are the U.S. Army Corps of Engineers and the Santa Ana Regional Water Quality Control Board. The Project is located within the Plunge Creek active floodplain and is considered Waters of the U.S. Project activities involving the physical alteration or direct discharge into Waters of the U.S. would require Federal Clean Water Act Permits would be required.

13. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the

California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

Applicable Native American tribes were consulted about the project. Written requests for comments were sent to the tribal representatives on January 12, 2018 to the following based on tribes who have commented on previous SBVWCD projects in the local area:

- Judy Stapp of the Cabazon Band of Mission Indians
- Michael Mirelez, Cultural Resources Coordinator for the Torres Martinez Desert Cahuilla Indians.
- Katie Croft, Archaeologist with the Tribal Historic Preservation Office of the Agua Caliente Band of Cahuilla Indians.
- Goldie Walker, Chairperson of the Serrano Nation of Indians.
- Joseph Ontiveros, Director of Cultural Resources for the Soboba Band of Luiseño Indians.

In addition, to the above contacts, the following tribal entities contacted the SBVWCD in 2015 requesting AB52 consultation on SBVWCD projects:

- Lee Clauss, MS, RPA, Director-CRM Department, San Manuel Band of Mission Indians 26569 Community Center Drive Highland, CA 92346.
- Andrew Salas, Chairman, Gabrieleno Band of Mission Indians - Kizh Nation, PO Box 393, Covina, CA 91723
- Raymond Huaute, Cultural Resource Specialist, Morongo Band of Mission Indians 12700 Pumarra Road, Banning, CA 92220

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project as indicated by the checklist on the following pages.

- | | | |
|---|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology / Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology & Water Quality |
| <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation / Traffic | <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation, the following finding is made:

	The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
X	Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
	The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	The proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION , including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

 Jericho Systems, Inc.
 Prepared by

 January 8, 2018
 Date

 Signature
 San Bernardino Valley Water Conservation District

 Date

EVALUATING ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect is significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analyses Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g. general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources. A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X

SUBSTANTIATION: (Check if project is located within a view-shed of any Scenic Route listed in the General Plan):

Environmental Setting

Plunge Creek drains 20.7 square miles (sq mi) beginning at the Metropolitan Water District (MWD) pipeline crossing located at the upstream limit of the project area (Figure 2). At the downstream end of the project area at the grade control structure located at the Orange Street Bridge, the total watershed area is 28 sq mi. This includes approximately 2.4 sq mi from Elder Creek and 1.2 sq mi from the Weaver Street Drain that empty into Plunge Creek within the project area, as well as additional land south of Plunge Creek that drains to the project site.

Watershed elevations range from a high of 6,537 ft along the ridgeline down to 1,418 ft at the MWD pipeline crossing and 1,273 ft at the downstream project boundary at the Orange Street Bridge. Plunge Creek is typically a dry channel during the months of June through October and only receives sustained runoff during the wet winter and early spring months.

Due to the relatively flat nature and remoteness of the Project, the facility cannot be viewed from the major roadways, or the closest roadways Abby Way and Orange Street Bridge. The area is also open, with no residential areas or tourist areas nearby.

Impact Analysis

a) *Have a substantial adverse effect on a scenic vista?*

No Impact. The CEQA Guidelines do not provide a definition of what constitutes a “scenic vista” or “scenic resource” or a reference as to from what vantage point(s) the scenic vista and/or resource, if any, should be observed. However, a scenic vista can generally be defined as a viewpoint from a public vantage that provides expansive views of a highly-valued landscape for the benefit of the general public. Common examples include undeveloped hillsides, ridgelines, and open space areas that provide a unifying visual backdrop to a developed area. Scenic resources are those landscape patterns and features that are visually or aesthetically pleasing and that

contribute affirmatively to the definition of a distinct community or region such as trees, rock outcroppings, and historic buildings.

The Project is located at grade and/or within a stream channel which generally cannot be seen from public access points. Additionally, the project will not change the channel alignment in a manner that would alter the existing visual character of the area. None of the proposed activities would have a substantial adverse effect on any scenic vista because the site is not a scenic vista, and the Project area surroundings do not afford a vantage point where the Project can be publicly viewed.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. There are no state scenic highways located within the Project Area, nor are there any scenic highways in the vicinity that will have views of the Project area. Therefore, the Project will not damage any scenic resources within or adjacent any scenic state highway. There will be no impact to trees or rock outcroppings, or historic buildings within a state scenic highway.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less Than Significant. The project is to modify stream channels in a floodplain in which cannot be seen from public areas. The channel splitters and separator wall will be made of native materials and the project cannot be viewed from public areas. Therefore, there will be no substantial degradation in the existing visual character of the site.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

No Impact. The project does not propose to install lighting, and all work will be conducted during the daytime hours. Therefore, there will be no impact to this criterion.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
<p>II. AGRICULTURE AND FORESTRY RESOURCES:</p> <p>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:</p>				
a) Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

SUBSTANTIATION: (Check if project is located in the Important Farmlands Overlay):

Environmental Setting

Even though the Project activities will occur within land zoned by the City of Highland as Agricultural/Equestrian Residential, the project activities will occur within an active channel. There are no farmlands or forest lands in the Project area.

Impact Analysis

a) *Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

No Impact. The Project Site was not identified within the survey limits of California Department of Conservation, Farmland Mapping and Monitoring Important Farmland Finder. No land under Williamson Act Contract occurs at the Project Site and no impacts will occur.

b) *Conflict with existing zoning for agricultural use or a Williamson Act contract?*

No Impact. As discussed above, no land on or near the project site is currently under agricultural production, nor are any parcels under a Williamson Act contract. Therefore, no impact is anticipated from the construction and operation of the proposed Project.

c) *Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?*

No Impact. Forest land is defined in Public Resources Code section 12220(g) as “land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.” The Project site is zoned Floodway. Implementation of the proposed Project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production because these designations do not occur at the Project site. No impact is identified and no mitigation measures are required.

d) *Result in the loss of forest land or conversion of forest land to non-forest use?*

No Impact. There is no forest land in the Project area. Therefore, there is no impact.

e) *Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?*

No Impact. Implementation of the proposed Project would not result in the conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. Therefore, there is no impact to this criterion.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
<p>III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:</p>				
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
d) Expose sensitive receptors to substantial pollutant concentrations?			X	
e) Create objectionable odors affecting a substantial number of people?			X	

SUBSTANTIATION: (Discuss conformity with the South Coast Air Quality Management Plan, if applicable):

a) *Conflict with or obstruct implementation of the applicable air quality plan?*

Less Than Significant. The applicable air quality plan is the South Coast Air Quality Management District’s (SCAQMD) 2016 Air Quality Management Plan (AQMP). The AQMD is a regional blueprint for achieving air quality standards and healthful air. Conflicts with the AQMP would arise if Project activities result in substantial increase in employment or population that was not previously adopted and/or approved in a General Plan. Large population or employment increases could affect transportation control strategies, which are among the most important in the air quality plan since transportation is a major contributor to particulates and ozone for which the South Coast Air Basin is not in attainment. Because the Project does not propose activities that would change population or employment levels within the air basin, the Project would not conflict with or obstruct implementation of the applicable air quality plan. The Project would implement measures to control air emissions during construction. This Project is consistent with the SCAQMDs plans and policies. Therefore, the project would not conflict with the SCAQMD’s AQMP. A less than significant impact is identified, and no mitigation measures are proposed.

- b) *Violate any air quality standard or contribute substantially to an existing or projected air quality violation?*
- c) *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?*

Less Than Significant. The following discussion applies to criteria b) and c). The proposed improvement project is within the Plunge Creek Wash and would require earthmoving within the wash over approximately 13 acres.

The project’s construction activities were screened for emission generation using South Coast Air Quality Management District (SCAQMD) “Air Quality Handbook” guidelines, Emission Factors for On-Road Heavy-Duty Diesel Trucks (2017) and SCAQMD Off-Road Mobile Source Emissions Factors (2017). These tables are used to generate emissions estimates for development projects. The criteria pollutants screened for included: reactive organic gases (ROG), nitrous oxides (NO_x), carbon monoxide (CO), and particulates (PM₁₀ and PM_{2.5}). Two of these, ROG and NO_x, are ozone precursors.

Grading will occur on within various areas of the native lands of the wash, and all soil is to be balanced for onsite reuse. Construction earthwork emissions are considered temporary and short-term (approximately 2 months), and construction emissions have been estimated using the method described above and using the following construction parameters:

Wash Area Earthwork, Typical Daily Equipment:

- 1 Loader/backhoe
- 1 Bulldozer
- 1 Grader/Excavator
- 1 Misc. Construction Equipment

The resulting construction emissions, as compared to the SCQAMD thresholds for each pollutant are shown in Table 1. The construction activities have been divided into three categories in order to apply the appropriate equipment usage to each category prior to estimating the emissions. Daily emissions were modeled with all pieces of equipment operating for 8 hours/day on a daily basis and all rip-rap delivered on the same day.

**Table 1
 Construction Emissions
 Channel Earthwork Activities
 (Pounds per Day)**

Source	ROG	NO_x	CO	PM₁₀	PM_{2.5}
Loader/Backhoe	0.5	3.0	2.9	0.2	0.2
Bulldozer	2.0	15.6	7.4	0.6	0.6
Grader/Excavator	0.9	6.4	4.7	0.3	0.3
Misc. Construction Eq.	0.5	4.0	2.9	0.3	0.3
Totals (lbs/day)	2.1	29.0	17.9	1.4	1.4
SCAQMD Threshold	75	100	550	150	55
Significant	No	No	No	No	No

Source: SCAQMD Off-Road Mobile Source Emissions Factors (2017)

As shown in Table 1, construction emissions would not exceed SCAQMD thresholds based on the worst-case scenario being daily emissions modeled with all pieces of equipment operating for 8 hours/day daily. Less than significant impacts are anticipated.

Compliance with SCAQMD Rules 402 and 403

Although the proposed project does not exceed SCAQMD thresholds for construction emissions, the SBVWCD is required to comply with all applicable SCAQMD rules and regulations as the South Coast Air Basin is in non-attainment status for ozone and suspended particulates (PM₁₀). The project shall comply with Rules 402 - Nuisance and 403 - Fugitive Dust, which require the implementation of Best Available Control Measures (BACM) for each fugitive dust source; and the Air Quality Management Plan (AMCP), which identifies Best Available Control Technologies (BACT) for area sources and point sources, respectively. This would include, but not be limited to the following BACMs and BACTs, as cited from the SCAQMD Rules:

- The project proponent shall ensure that any portion of the site to be graded shall be pre-watered prior to the onset of grading activities.
 - (a) The project proponent shall ensure that watering of the site or other soil stabilization method shall be employed on an on-going basis after the initiation of any grading activity on the site. Portions of the site that are actively being graded shall be watered regularly to ensure that a crust is formed on the ground surface, and shall be watered at the end of each workday.
 - (b) The project proponent shall ensure that all disturbed areas are treated to prevent erosion.
 - (c) The project proponent shall ensure that all grading activities are suspended during first and second stage ozone episodes or when winds exceed 25 miles per hour.

Exhaust emissions from construction vehicles and equipment and fugitive dust generated by equipment traveling over exposed surfaces, would increase NO_x and PM₁₀ levels in the area. Although the proposed Project does not exceed SCAQMD thresholds during construction, the SBVWCD will be required to implement the following conditions as required by SCAQMD:

- To reduce emissions, all equipment used in earthwork must be tuned and maintained to the manufacturer's specification to maximize efficient burning of vehicle fuel.
- The project proponent shall ensure that construction personnel are informed of ride sharing and transit opportunities.
- The operator shall maintain and effectively utilize and schedule on-site equipment in order to minimize exhaust emissions from truck idling.
- The operator shall comply with all existing and future CARB and SCAQMD regulations related to diesel-fueled trucks, which may include among others: (1) meeting more stringent emission standards; (2) retrofitting existing engines with particulate traps; (3) use of low sulfur fuel; and (4) use of alternative fuels or equipment.

Implementation of the Project does not exceed the SCAQMD significance thresholds for construction activities, and there would be no operational emissions. Although there would be emissions from vehicles and equipment during construction, the emissions would be temporary, of short duration, and below the established thresholds. In addition, Project emissions of particulate matter would be reduced by implementing BACMs as outlined in SCAQMD dust control Rules 402 - Nuisance and 403 - Fugitive Dust. The Project would not generate long-term

emissions of criteria pollutants and would therefore not cause a cumulatively considerable increase in criteria pollutants. A less than significant impact is identified, and no mitigation measures are proposed.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant. Sensitive receptors are those facilities used by a population group that is more susceptible to the effects of air pollutants. Sensitive receptors include residences, schools, playgrounds, child-care centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The project site is within a rural residential area and the nearest residence is approximately 0.5-mile feet to the north. As shown in Table 1, construction impacts are not anticipated to exceed SCAQMD thresholds. No operational emissions would occur. With implementation of BACMs, emissions of dust or vehicle exhaust fumes associated with construction would be short-term and would not expose sensitive receptors to substantial pollutant concentrations. A less than significant impact is identified, and no mitigation measures are proposed

e) Create objectionable odors affecting a substantial number of people?

No Impact. Project construction equipment would generate odors from the combustion of fuels. However, the determination of an impact from Project-generated odors is dependent on a number of variables including:

- Nature of the odor source;
- Frequency of odor generation (e.g., daily, seasonal, activity-specific);
- Intensity of the odor (e.g., concentration);
- Wind direction (e.g., upwind or downwind); and
- Sensitivity of the receptor.

As shown in Table 1, construction impacts are not anticipated to exceed SCAQMD thresholds of significance. No operational emissions are anticipated. Impacts associated with emission odors would be temporary during Project construction activities. Due to the rural nature of the project area, it is anticipated that the short-term odors generated by construction equipment would dissipate rapidly. Impacts would be less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			X	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			X	
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		X		
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?			X	

SUBSTANTIATION: (Check if project is located in the Biological Resources Overlay or Contains habitat for any species listed in the California Natural Diversity Database):

Regulatory Setting

Special status species are native species that have been afforded special legal or management protection because of concern for their continued existence. There are several categories of protection at both federal and state levels, depending on the magnitude of threat to the continued existence and existing knowledge of population levels.

Federal Endangered Species Act

The USFWS administers the federal Endangered Species Act (ESA) of 1973. The ESA provides a legal mechanism for listing species as either threatened or endangered, and a process of protection for those species listed. Section 9 of the ESA prohibits "take" of threatened or endangered species. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. "Take" can include adverse modification of habitats used by a threatened or endangered species during any portion of its life history. Under the regulations of the ESA, the USFWS may authorize "take" when it is incidental to, but not the purpose of, an otherwise lawful act. Take authorization can be obtained under Section 7 or Section 10 of the act.

California Endangered Species Act

The CDFW administers the California Endangered Species Act (CESA). The State of California considers an endangered species one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is one present in such small numbers throughout its range that it is likely to become an endangered species soon, in the absence of special protection or management. And a rare species is one present in such small numbers throughout its range that it may become endangered if its present environment worsens. Rare species applies to California native plants. Further, all raptors and their nests are protected under Section 3503.5 of the FGC. Species that are California fully protected include those protected by special legislation for various reasons, such as the California condor. Species of Special Concern (SSC) is an informal designation used by CDFW for some declining wildlife species that are not proposed for listing as threatened or endangered. This designation does not provide legal protection, but signifies that these species are recognized as sensitive by CDFW.

California Fish and Game Code (FGC)

Sections 1600 to 1616 of the California FGC require any person, state, or local government agency or public utility to notify the CDFW before beginning any activity that will substantially modify a river, stream, or lake. If it is determined that the activity could substantially adversely impact an existing fish and wildlife resource, then a Lake or Streambed Alteration Agreement is required. CDFW regulates all activities that alter streams and lakes and their associated habitats. The CDFW typically extends the limits of their jurisdiction laterally beyond the water's edge to the outer dripline of the associated riparian vegetation. CDFW regulates wetland areas only to the extent that those wetlands are a part of a river, stream, or lake as defined by CDFW.

The Migratory Bird Treaty Act

Nesting birds are protected under the federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C 703-711). The MBTA provides protection for nesting birds that are both residents and migrants whether or not they are considered sensitive by resource agencies. The MBTA prohibits take of nearly all birds. The MBTA makes it unlawful to kill or possess migratory birds, including feathers, other parts, nests, and eggs. The direct injury or death of a migratory bird, due to construction activities or other construction-related disturbance that causes nest abandonment, nestling abandonment, or forced fledging would be considered take under federal law. The USFWS, in coordination with the CDFW administers the MBTA.

Clean Water Act

The CWA is the principal federal law that governs pollution in the nation's lakes, rivers, and coastal waters. Originally enacted in 1972 as a series of amendments to the Federal Water Pollution Control Act of 1948, the Act was last amended in 1987. The overriding purpose of the CWA is to "restore and maintain the chemical, physical

and biological integrity of the nation's waters." The Corps administers the federal sections of the CWA. Under Section 404 of the CWA, the Corps has the primary federal responsibility for administering regulations that concern the discharge of dredged or fill material into Waters of the U.S., including wetlands which are defined as areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions". In California, the State Water Resources Control Board (SWRCB) and its nine RWQCBs are the designated authorities to administer Section 401 of the CWA. This Project is within the jurisdiction of the Santa Ana RWQCB.

Wash Plan HCP

The Wash Plan HCP is necessary to implement components of the Wash Plan and comply with the FESA and CESA. It is not intended to meet the regulatory permit requirements of other federal and state regulations, however, it has been designed to be consistent with those other regulations. Compliance with other state and federal regulations should be coordinated with the implementation of the HCP to maximize the efficiency of regulatory requirements such as mitigation, monitoring, and reporting. Other state and federal regulations that may apply to one or more Covered Activities are as follows:

- California Fish and Game Code Sections 3511, 4700, 5050, and 5515 (Fully Protected Species)
- California Fish and Game Code Section 3503 (Bird Nests)
- California Fish and Game Code Section 3503.5 (Birds of Prey)
- Migratory Bird Treaty Act (MBTA)
- Bald and Golden Eagle Protection Act (Eagle Act)
- California Environmental Quality Act of 1970 (CEQA)
- Clean Water Act Sections 401, 402, and 404
- Porter-Cologne Water Quality Control Act
- Fish and Game Code Sections 1601–1607 (Lake or Streambed Alteration Agreement)

The Wash Plan HCP has been prepared as part of the Incidental Take Permit (ITP) application submitted by the SBVWCD to the USFWS. A number of other entities wish to participate in the implementation of the HCP through a Certificate of Inclusion (COI, described below) in order to receive coverage for their planned projects. They include the City of Redlands, City of Highland, SBVWCD, East Valley Water District (East Valley), Cemex, Inc., and Robertson's Ready-Mix. The San Bernardino County Flood Control District (SBCFCD) will pursue an independent Implementing Agreement (IA) and ITP under the HCP.

The SBVWCD is asking the USFWS to authorize incidental take under the Federal ESA for the California gnatcatcher (*Polioptila californica californica*, [CAGN]), San Bernardino kangaroo rat (*Dipodomys merriami parvus*, [SBKR]), Santa Ana River woolly-star (*Eriastrum densifolium* ssp. *sanctorum*, woolly-star), and slender-horned spineflower (*Dodecahema leptoceras*, spineflower). Woolly-star and spineflower are also state-listed species, and therefore require State authorization under the CESA.

The SBVWCD will act as permit holder for the ITP and will convey the permit authority to other participants (Participating Entities) under Certificates of Inclusion (COI). Each COI will be associated with a single Participating Entity and will address one or a group of closely related Covered Activities. Flood Control has committed to work with USFWS to finalize their IA and ITP within two years of the issuance of the SBVWCD's ITP under this HCP.

Environmental Setting

A biological resources study was prepared for the Wash Plan area (Dudek, February 2007). Jericho Systems, Inc (Jericho) performed an Aquatic Resource Delineation Report (Jericho, October 2017) for the Project.

Topography

The surface elevation of the project site ranges from approximately 1,340 feet above mean sea level (AMSL) at the western end of the site to approximately 1,420 feet AMSL at the eastern end of the site. The site is generally located within the broad, gently sloping, alluvial fan plain of the San Bernardino Mountains. The Creek is situated at the base of the southern foothills of the San Bernardino Mountains, within the Santa Ana River floodplain.

Precipitation runoff will flow down the steep mountain slopes in numerous small channels, which converge and form larger, well-defined channels or washes. These channels retain their definition until the slopes flatten and the flow changes to rill and braided overland flow within the gently sloping alluvial fan plain. There is high absorption in these flood plains due to slow runoff and rapid permeability.

Hydrology

The flow from Plunge Creek originates from runoff in the San Bernardino Mountains at an elevation of approximately 5,800 feet AMSL. The runoff from other creeks and streams flow into Plunge Creek as it flows down the mountain. The water is funneled into continually larger portions of Plunge Creek, until it reaches the base of the mountain. From there it reaches the Santa Ana River flood plain. Plunge Creek terminates at its junction with City Creek, directly adjacent to the San Bernardino International Airport. City Creek continues south until it terminates with the Santa Ana River.

Weather

The Highland area is subject to both seasonal and annual variations in temperature and precipitation. Average annual maximum temperatures typically peak at 96 degrees Fahrenheit (°F) in August, and fall to an annual minimum temperature of 41°F in December. Average annual precipitation is greatest from December through March and reach a peak in February (3.7 inches). Precipitation is lowest in the month of July (0.04 inches). Annual precipitation averages 16.43 inches.

Watershed Description

The Project is within the Upper Santa Ana River Hydrologic Unit of the Santa Ana Watershed (HUC 18070203). This watershed is primarily within San Bernardino County and includes Riverside and Orange Counties with a small portion of Los Angeles Counties. The Santa Ana Watershed is bound on the north by the Mojave and Southern Mojave Watersheds, on the southeast by the Whitewater and San Jacinto Watersheds, and on the west by the San Gabriel, Seal Beach, Newport Bay, and Aliso-San Onofre Watersheds. The Santa Ana Watershed encompasses a portion of the San Gabriel and San Bernardino Mountains in the south and is approximately 3,000 square miles in area.

Approximately 68 miles southwest (downstream) of the Project site, the Santa Ana River discharges into the Pacific Ocean. The Santa Ana River is the major hydrogeomorphic feature within the Santa Ana Watershed. Major tributaries to the Santa Ana River, within the region, include Mill, Lytle, Cajon, City, and Plunge Creeks.

Vegetation

The primary plant community occurring within the Project area and surrounding area is Riversidean alluvial fan sage scrub (RAFSS) which is a rare and sensitive plant community that is adapted to the harsh conditions of flooding. It grows on sandy, rocky alluvium deposited by streams that experience infrequent episodes of flooding. Because alluvial fan sage scrub is characterized by its diversity, it can also be described as an intermediate between chaparral and sage scrub habitats, in that all three vegetation communities share similar floral components. However, the distinguishing factor is that alluvial fan sage scrub undergoes periodic scouring from frequent flooding events, creating three seral stages; pioneer, intermediate, and mature. Native plant species associated with this community that occur on-site include deerweed (*Acmispon glaber*), California sagebrush (*Artemisia californica*), California croton (*Croton californicus*), California cholla (*Cylindropuntia californica*), brittlebush (*Encelia farinosa*), hairy yerba santa (*Eriodictyon trichocalyx*), California buckwheat (*Eriogonum fasciculatum*), Chaparral yucca (*Hesperoyucca whipplei*), scalebroom (*Lepidospartum squamatum*), and Vasey's prickly pear (*Opuntia vaseyi*).

There are many non-native, invasive species that occur on-site including tumbleweed (*Amaranthus albus*), several exotic invasive grasses (*Avena* sp. and *Bromus* sp.), short pod mustard (*Hirschfeldia incana*), tree tobacco (*Nicotiana glauca*), fountaingrass (*Pennisetum setaceum*), and castor bean (*Ricinus communis*).

Species Known to Occur in Plan Area

The Dudek biological resources report prepared for the Wash Plan HCP identifies multiple listed endangered, threatened, and sensitive species that are known to occur within the Wash Plan HCP area. The Project is located within the northern portion of the Wash Plan HCP area, therefore, these species are presumed to be also within the Project area (Dudek, February 2007).

Special Status Species

The Wash Plan HCP identifies incidental take for several sensitive species, as well as conservation and mitigation measures that apply to the Project (Dudek, February 2007). All avoidance, minimization, and conservation measures are identified in Section 3 of this analysis. The purpose of the project is to foster the physical processes necessary to complement or create new habitat area. The Wash Plan HCP is expected to receive concurrence from the USFWS, in which the ITP for this Project will be approved. The key endangered species of concern within the project area are the Santa Ana River woolly-star, Slender-horned spineflower, SBKR and CAGN.

San Bernardino kangaroo rat (SBKR)

The SBKR is one of several kangaroo rat species in its range. The Dulzura (*Dipodomys simulans*), the Pacific kangaroo rat (*D. agilis*) and the Stephen's kangaroo rat (*D. stephensi*) occur in areas occupied by the SBKR, but these other species have a wider habitat range. The habitat of the SBKR is described as being confined to primary and secondary alluvial fan scrub habitats, with sandy soils deposited by fluvial (water) rather than aeolian (wind) processes. Burrows are dug in loose soil, usually near or beneath shrubs. SBKR are confined to inland valley scrub communities and, more particularly, to scrub communities occurring along rivers, streams and drainages. SBKR do not tend to occupy areas that have high non-native grass density because as the vegetation density hindered burrowing and movement. Experimental thinning of vegetation in the Santa Ana River resulted in an increase of SBKR utilization of the more open habitat. A map showing SBKR critical habitat, habitat suitability, and trapping results within the project area is presented in Figure 4. The mapping shows that the lowest SBKR habitat suitability occurs along the active Plunge Creek channel and the highest potential occurs along the large remnant channel feature located in the western portion of the floodplain south of Plunge Creek. A key project goal

is to reactivate the remnant channels so natural fluvial processes of scour and sedimentation can create the substrate and vegetation conditions required for healthy SBKR habitat. The habitat potential in these remnant channels will become reduced the longer these features remain disconnected from the main channel as vegetation densities and non-native grasses will increase beyond suitable conditions for SBKR (ICF, April 2016).

Coastal California gnatcatcher (CAGN)

This small thrush-like songbird is a federally listed as Threatened species that occurs in in southern California. It is four to five inches in length with dark, blue-gray plumage above and gray-white plumage below. The CAGN are year-round residents (non-migratory) which typically nests and forages in coastal sage scrub vegetation. Nest building begins during the second or third week of March. CAGN occur in sage scrub habitats and non-sage scrub habitats such as chaparral, grassland, riparian areas, in proximity to sage scrub habitats. The PCEs identified by the USFWS for CAGN consist of the following: (1) Dynamic and successional sage scrub habitats: Venturan coastal sage scrub, San Diegan coastal sage scrub, Riversidean sage scrub, maritime succulent scrub, RAFSS, southern coastal bluff scrub, and coastal sage-chaparral scrub areas that provide space for individual and population growth, normal behavior, breeding, reproduction, nesting, dispersal and foraging; and (2) Non-sage scrub habitats such as chaparral, grassland, riparian areas, in proximity to sage scrub habitats as described for PCE 1 above that provide space for dispersal, foraging, and nesting. The CAGN is documented to occur close to the project area. Furthermore, the Primary Constituent Elements (PCEs) for this species (RAFSS with proximal non-sage scrub habitats) are present within the project site and surrounding areas. Therefore, CAGN have a moderate potential to occur within and/or adjacent to the project area.

Santa Ana River woolly-star

The Santa Ana River woolly-star (*Eriastrum densifolium* ssp. *sanctorum*) is a federal- and State-listed endangered species. The Santa Ana River woolly-star is a shrubby perennial plant that blooms from June to August, produces bright blue flowers, and grows up to 3.3 feet tall. It is found in alluvial scrub plant communities along the Santa Ana River and Lytle and Cajon Creek flood plains from the base of the San Bernardino Mountains in San Bernardino County southwest along the Santa Ana River through Riverside County into the Santa Ana Canyon of northeastern Orange County. Associated perennial plants include California buckwheat, California croton, yerba santa, and scalebroom. This species is readily identifiable throughout the year. The Santa Ana River woolly-star is most competitive in early stage habitats with 97% or greater sand particles. It thrives where there is light to heavy surface disturbances that keep >90% of soil substrate sand and keep the ground cover to a minimum. Santa Ana River woolly-star are present in the project area. Approximately 275 individuals will be impacted by the permanent and temporary project-related land disturbances. As stated previously, this project follow the HCP measures identified for the special status species.

Slender-horned spineflower

Slender-horned spineflower (*Dodecahema leptoceras*), a federal- and State-listed endangered plant species that is also associated with alluvial fans, floodplains, stream terraces, washes and associated benches. However, unlike the Santa Ana River woolly-star, it grows in on the high benches flanking the more active floodplain. It prefers areas containing soils high in silt and low in nutrients and organic matter, and located in silt filled shallow depressions of relatively flat surfaces near scattered, river-rounded cobble-sized rocks. A few occurrences can be found on low alluvial benches or braids within active channels. A map showing slender-horned spineflower occurrences observed within the project area pre-2000 and between 2000-2012, and occupied or potentially suitable habitat, is presented in Figure 5. Three areas are mapped as occupied habitat in the HCP project area: two upstream of the MWD pipeline and one on the terrace at the downstream boundary near Orange Street. This species is not documented on this project site.

Nesting birds

Vegetation suitable for nesting birds does exist within the project site and adjacent areas.

Western spadefoot and California glossy snake

The western spadefoot is a moderate-sized greenish, brown, cream, or gray toad that has a glossy black spade, shaped like a wedge or teardrop, present on each hind foot. The California glossy snake is a moderately-sized snake (26-70 in.) that has smooth, glossy scales, with a faded or bleached-out appearance, a tan or light brown ground color with dark brown blotches with dark edges on the back and sides and a pale, unmarked underside. Both are CDFW Species of Special Concern (SSC). These animals are nocturnal and almost completely terrestrial, entering water only to breed. There are documented occurrences of both species within Plunge Creek. Jericho biologist Daniel Smith observed western spadefoots breeding in rain pools and foraging in this area in 2015, 2016 and early 2017. Plunge Creek represents one of the few areas in the region where these species have been documented and Jericho's Mr. Smith has observed California glossy snakes and western spadefoot within and adjacent the upper Santa Ana River Wash from 2015-2017. Potentially suitable habitat for both species exists throughout the Plunge Creek Project area.

Jurisdictional Waters

Currently, Plunge Creek is an ephemeral creek that flows during rain events, originating from various sources in the San Bernardino mountains. The creek terminates at the junction with the Santa Ana River. During the storms of 1969, a large silt plume accumulated within Plunge Creek and is currently diverting water away from the historical flow lines.

In 2017, Jericho Systems, Inc (Jericho) biologists Shay Lawrey, Todd White, Shannon Dye and Eugene Jennings conducted an aquatic resources assessment and jurisdictional delineation in accordance with regulations and guidance set forth by the Corps and CDFW (Jericho, October 31, 2017). The study determined that Plunge Creek has an average width of 92.9 feet and spans the entire project site, 1.2 miles long. Of the total project impacts of 5.9 acres-permanent and 8 acres-temporary, there will be 0.63 acre-permanent and 0.61 acre-temporary impacts to state and federal waters that are subject to the California Fish and game Code (FGC) and federal Clean Water Act (CWA) respectively. Therefore, regulatory permits will be required from the Corps, RWQCB and CDFW. These permits are currently in process with these agencies.

Jurisdictional Wetlands

Jericho also assessed for indicators wetlands (presence of hydrophytic vegetation, staining, cracked soil, ponding, etc). Depressions/ponded areas where water appears likely to collect were also evaluated. Plant species were identified and given an indicator status as prescribed in the 2013 National Wetland Plant List (Arid West Region) (Lichvar, 2013). No jurisdictional wetlands were found in the project area (Jericho, October 31, 2017).

Impact Analysis

- a) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

Less Than Significant. Based on the biological resources study prepared for the Wash Plan area (Dudek, February 2007) the following species have been identified:

- San Bernardino kangaroo rat – federally-listed, endangered
- Coastal California gnatcatcher - State- and federally-listed threatened
- Santa Ana River woolly-star - federal- and State-listed endangered
- Slender-horned spineflower - federal- and State-listed species

The Wash Plan HCP was prepared comply with the FESA and CESA in accordance with USFWS guidance provided in the 1996 *Habitat Conservation Planning Handbook (HCP Handbook)*, the 2000 Addendum to the *HCP Handbook* and the revised 2016 *HCP Handbook*. The Wash Plan HCP includes avoidance, minimization, and mitigation measures for each of the Covered Species, whether or not it is currently federally listed. The HCP also identifies the potential take of listed species.

The draft Wash Plan HCP is currently under public review. The Wash Plan HCP was prepared as part of the Incidental Take Permit (ITP) application submitted by the SBVWCD to the USFWS for authorization of incidental take under Section 10 of the Federal Endangered Species Act (FESA) for the following species: CAGN, SBKR, Santa Ana River woolly-star, slender-horned spineflower and Cactus wren (*Campylorhynchus brunneicapillus*). Since the slender-horned and woolly-star are also state-listed species, state authorization under the California Endangered Species Act for incidental take of these species is required. The draft Wash Plan HCP is currently under public review.

There is a less than significant impact because the Wash Plan HCP identifies avoidance, minimization, and conservation measures which are incorporated as part of this Project. Additionally, the USFWS is in the process of authorizing the take of listed species under the Consultation/ITP process.

b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

Less Than Significant. Based on the findings of the site survey (Jericho, April 2017), the primary plant community occurring within the Project area and surrounding area is RAFSS. Native plant species associated with this community that occur on-site include deer weed, California sagebrush, California croton, California cholla, brittlebush, hairy yerba santa, California buckwheat, Chaparral yucca, scalebroom, and Vasey's prickly pear. The non-native, species that occur on-site include tumbleweed, several alien, invasive grasses, short pod mustard, tree tobacco, fountaingrass, and castor bean.

Of the total project impacts of 5.9 acres-permanent and 8 acres-temporary, there will be 0.63 acre-permanent and 0.61 acre -temporary impacts to state and federal waters which contains RAFSS. The Wash Plan HCP identifies that all current and future SBVWCD activities, including with the implementation of the Project will include 147.5 acres of enhanced sage scrub and 1,529.8 acres of preserved land (ICF, December 2016). Additionally, the Project is designed to enhance and increase the RAFSS habitat. Therefore, there is a less than significant impact.

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

No Impact. The site does not support wetlands (Jericho, October 31, 2017). This project site does not contain any feature that qualifies as a jurisdictional wetland. This finding is based on a field survey of the project site. This project will not result in the direct removal, filling, hydrological interruption, or other impacts to federally

protected wetlands as defined by Section 404 of the CWA because site inspection verified that no such resources exist on the project site. The project will have no impact on protected wetlands.

d) *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

Less Than Significant with Mitigation Incorporated. Nestable vegetation occurs within and adjacent to the Project site. Pursuant to the Migratory Bird Treaty Act and California FGC, construction activities and/or the removal of any trees, shrubs, or any other potential nesting habitat should be conducted outside the avian nesting season to avoid impacts to nesting birds. The nesting season generally extends from February 1 through August 31, but can vary slightly from year to year based upon seasonal weather conditions.

Construction is scheduled to occur between May and August, ideally after the storm season has occurred so the existing facility can remain operational as long as possible.

Because construction is scheduled to occur during the avian nesting season, **Mitigation Measure BIO-1** would reduce the potential impact to nesting birds to less than significant. Mitigation measures are located at the end of this section.

The western spadefoot and California glossy snake are known to exist within the area. **Mitigation Measure BIO-2** will be implemented to ensure impacts will be less than significant. Mitigation measures are located at the end of this section.

e) *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

Less Than Significant. The project site is an existing active channel within no biological resources protected by any local policies or ordinances. The Wash Plan HCP identifies this Project specifically, and the USFWS will process an ITP that will allow for the take of federally-listed species.

f) *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

Less Than Significant. The Wash Plan HCP identifies the Project, and the ITP will authorize the take of species for this Project. There are no other Natural Community Conservation Plans or other approved local, regional or state habitat conservation plans. Therefore, the impacts are less than significant.

Mitigation Measures:

BIO-1 The project site shall be surveyed for nesting birds by a qualified avian biologist within three (3) days prior to initiating the construction activities. If active nests are found during the pre-construction nesting bird surveys, a Nesting Bird Plan (NBP) will be prepared and implemented. At a minimum, the NBP will include guidelines for addressing active nests, establishing buffers, monitoring, and reporting. The NBP will include a copy of maps showing the location of all nests and an appropriate buffer zone around each nest sufficient to protect the nest from direct and indirect impact. The size and location of all buffer zones, if required, shall be determined by the biologist, and shall be based on the nesting species, its sensitivity to disturbance, and expected types of disturbance. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved buffer zone shall be marked in the field with construction fencing, within which no vegetation clearing

or ground disturbance shall commence until the qualified biologist has determined the young birds have successfully fledged and a monitoring report has been submitted reviewed and approved by the SBVWCD.

BIO-2 Prior to ground disturbing activities, a qualified biologist should conduct a nocturnal and diurnal preconstruction survey for western spadefoot and California glossy snake within the fenced footprint. If either species is found they will be relocated outside of the work area.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in 15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.5?		X		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		
d) Disturb any human remains, including those interred outside of formal cemeteries?		X		

SUBSTANTIATION: (Check if project is located in the Cultural or Paleontologic Resources overlays or cite results of cultural resource review)

Environmental Setting

Cultural resources consultant ICF completed a cultural resources records search to identify prehistoric or historic-period resources within one mile of the Project site (ICF, December 2016). The report is on file with the SBVWCD.

The records searches identified no previously recorded resources within the APE. It identified 70 cultural resources, at least 8 of which are within approximately 1 mile of the APE. Of these, two resources were documented as being located just outside of the Area of Potential Effect (APE) for the cultural resources survey. Both resources are described as being unevaluated historic trash scatters. These trash scatters were relocated to outside of the cultural resources study APE.

Additionally, a historic water channel was also identified. It appeared to be made of local material found from within and adjacent to the resource. The channel was present in 1938 historic aerials of the project site. It consists of two parallel berm earth works, approximately 12 feet across at the bottom and 5 feet tall. From the top of the berm to top of berm it is approximately 35 feet. The berms are constructed of soil and cobble stones. However, the site was determined to lack the eligibility requirements for listing on the California or National Historic Register as an important cultural resource.

Native American input during the study did not identify any sites of traditional cultural value in the vicinity, and no notable cultural features were known to exist in the Project area throughout the historic period. Furthermore, the subsurface sediments in the Project area appear to be low in sensitivity for buried deposits of potentially significant archaeological remains, especially those of prehistoric origin. Based on these considerations, the CRM research concluded that no “historic properties,” “historical resources,” or “tribal cultural resources” are present within or adjacent to the Project area.

Impact Analysis

a) *Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?*

No Impact. Because there are no historical resources in the Project area, there will be no adverse change in a historical resource.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?

Less Than Significant with Mitigation Incorporated. Because there are no archeological resources in the Project area, there will be no change in an archaeological resource. However, in the event an unanticipated resource is discovered, implementation of **Mitigation Measure CUL-1** is incorporated to ensure any potential impact will be less than significant. Mitigation measures are located at the end of this section.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant with Mitigation Incorporated. Because the soil conditions have been subject to extensive fluvial processes and no unique geologic features are present on site, the likelihood of paleontological resources is low. Therefore, there will be a less than significant impact to paleontological resources. However, in the event an unanticipated resource is discovered, implementation of **Mitigation Measure CUL-1** is incorporated to ensure any potential impact will be less than significant. Mitigation measures are located at the end of this section.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant with Mitigation Incorporated. There are no known human remains within the vicinity of the project site, and no conditions exist that suggest human remains are likely to be found on the project site. It is not anticipated that implementation of the project would disturb human remains, including those interred outside of formal cemeteries. However, ground-disturbing activities, such as grading or excavation, have the potential to disturb human remains. If human remains are found, those remains would require proper treatment, in accordance with applicable laws. The Native American Graves Protection and Repatriation Act (NAGPRA) includes provisions for unclaimed and culturally unidentifiable Native American cultural items, intentional and inadvertent discovery of Native American cultural items on federal and tribal lands, and penalties for noncompliance and illegal trafficking. State of California Public Resources Health and Safety Code Section 7050.5-7055 describes the general provisions regarding human remains, including the requirements if any human remains are accidentally discovered during excavation of a site. As required by state law, the requirements and procedures set forth in Section 5097.98 of the California Public Resources Code would be implemented, including notification of the County Coroner, notification of the Native American Heritage Commission and consultation with the individual identified by the Native American Heritage Commission to be the “most likely descendant.” If human remains are found during excavation, excavation must stop in the vicinity of the find and any area that is reasonably suspected to overlie adjacent remains until the County Coroner has been called out by local law enforcement, and the remains have been investigated and appropriate recommendations have been made for the treatment and disposition of the remains. **Mitigation Measure CUL-2** would ensure the proper management of human remains if encountered on the project site. Additionally, **Mitigation Measure CUL-1** is also incorporated to reduce potential impacts to any unanticipated Native American resources. With the implementation of **Mitigation Measures CUL-1 and CUL-2**, impacts would be less than significant. Mitigation measures are at the end of this section.

Mitigation Measures:

- CUL-1** In the event that evidence of archaeological or paleontological resources are unearthed during construction activities, work in the immediate vicinity of the find will be stopped and a qualified archaeologist will be contacted to assess the find and recommend appropriate mitigation. No disturbance shall occur in the vicinity of the find until the site is evaluated by the archaeologist and the find is recorded or treated per the recommendations of the qualified archaeologist.
- CUL-2** In the event that human remains are discovered, there shall be no disposition of such human remains, other than in accordance with the procedures and requirements set forth in California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98. These code provisions require notification of the County Coroner and the Native American Heritage Commission, who in turn must notify those persons believed to be most likely descended from the deceased Native American for appropriate disposition of the remains. Excavation or disturbance may continue in other areas of the project site that are not reasonably suspected to overlie adjacent remains or archaeological resources.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VI. GEOLOGY AND SOILS: Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
<ul style="list-style-type: none"> Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. 			X	
<ul style="list-style-type: none"> Strong seismic ground shaking? 			X	
<ul style="list-style-type: none"> Seismic-related ground failure, including liquefaction? 			X	
<ul style="list-style-type: none"> Landslides? 			X	
b) Result in substantial soil erosion or the loss of topsoil?		X		
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X

SUBSTANTIATION: (Check if project is located in the Geologic Hazards Overlay District):

Environmental Setting

The Project Area lies at the northeastern edge of the Peninsular Ranges Geomorphic Province, in the San Bernardino Valley. The geomorphology of the Peninsular Ranges is characterized by northwest/southwest-trending mountain ridges, valleys, and faults which run parallel and sub-parallel to the San Andreas Fault. As a result of the active tectonism of the area, the surficial geology of this province is typified by gently to moderately sloping igneous and metamorphic rocks of the Peninsular Ranges (URS, 2008)

The Project Area is bounded by the San Andreas Fault to the northeast and the San Jacinto Fault to the southwest. The San Andreas Fault is a right-lateral strike-slip fault and considered to be currently active segment of the San Andreas fault system northwest of the San Gorgonio Pass. It forms an obvious linear scarp along the northeastern edge of the San Bernardino basin. The last major earthquake along the south branch of the San Andreas was the

1857 Fort Tejon earthquake, estimated at a Richter magnitude of 8.0 plus. The San Andreas Fault is capable of generating an earthquake magnitude of up to 8.3 on the Richter scale. Located approximately 4.5 miles southwest of Highland, the San Jacinto Fault Zone has a maximum credible earthquake Richter magnitude of 8.5 and has the potential for significant ground shaking within the region. (City of Highland, March 2006).

The City of Highland's General Plan classifies the Project Area as "Active River Channel Alluvium and Alluvial Fan Deposits."

Impact Analysis

a) *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*

- *Rupture of a known earthquake fault, as delineated on the most recent Alquist Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.*
- *Strong seismic ground shaking?*
- *Seismic related ground failure, including liquefaction?*
- *Landslides?*

Less Than Significant. Several faults exist within the region that have the capability of producing a magnitude 6.7 or higher earthquake. The site is not located along an Alquist-Priolo earthquake fault. The project area has not been identified as being subject to landslides. The site is underlain by young unconsolidated alluvium, and groundwater is approximately 200 feet below ground surface (bgs).

The Project is to restore the historic channel configuration through earthmoving. No habitable structures or other structures that would expose people or other structures to potential adverse effects involving an earthquake rupture, strong seismic ground shaking, liquefaction or landslides.

The exposure does not have a substantial adverse effect because it is in a remote location and there is no risk to life or property if it fails. Therefore, there is a less than a significant impact.

b) *Result in substantial soil erosion or the loss of topsoil?*

Less Than Significant With Mitigation Incorporated. Construction will require regrading the historic flow path of Plunge Creek to facilitate positive drainage. The project will utilize soil balancing to achieve the desired grades. Therefore, there is no net loss of the topsoil, nor does the maintenance result in substantial soil erosion.

No significant excavation would occur that would result in erosion or the loss of native topsoil. To prevent the loss of stockpiled materials, implementation of **Mitigation Measure GEO-1** is recommended. Mitigation measures are located at the end of this section.

c) *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?*

Less Than Significant. The Project is located within very young alluvium where groundwater is anticipated to be approximately 200 feet below ground surface, and the potential for liquefaction has been identified. However,

the Project is to re-establish a historic flowpath to improve habitat and water flow. Therefore, the impact of this criterion is less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

No Impact. The young alluvium found within the project area has low to no shrink-swell potential (expansive soils). Neither the City of Highland or San Bernardino County General Plans identify the Project area as having expansive soil. The Project is not designed for human habitation; therefore, there is no impact.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The project does not propose the use of septic tanks or alternative wastewater disposal systems. Therefore, there is no impact.

Mitigation Measure:

GEO-1 The contractor will provide to the SBVWCD an Erosion Control Report (ECR) that will identify the Best Management Practices (BMPs) for managing any stockpiled materials on site. The BMPs may include but not be limited to the following:

- Locate stockpiles away from drainage courses, drain inlets or concentrated flows of storm water.
- For wind erosion control, apply water or other dust palliative to stockpiles. Smaller stockpiles may be covered as an alternative.
- Place bagged materials on pallets under cover.
- During the rainy season, non-active soil stockpiles will be covered with heavy plastic and the stockpile contained within a temporary perimeter sediment barrier, such as berms, dikes, silt fences, or sandbag barriers. A soil stabilization measure may be used in lieu of cover.
- During the non-rainy season prior to the onset of rain, the stockpile should either be covered or protect them with temporary perimeter sediment barriers.
- Year-round, active soil stockpiles will be protected with temporary linear sediment barriers prior to the onset of rain.
- The main haul road will be graded and watered at least once per day, or as often as necessary to control dust as required by the South Coast Air Quality Management District (SCAQMD).

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VII. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Background

“Greenhouse gases” (so called because of their role in trapping heat near the surface of the earth) emitted by human activity are implicated in global climate change, commonly referred to as “global warming.” These greenhouse gases contribute to an increase in the temperature of the earth’s atmosphere by transparency to short wavelength visible sunlight, but near opacity to outgoing terrestrial long wavelength heat radiation in some parts of the infrared spectrum. The principal greenhouse gases (GHGs) are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. For purposes of planning and regulation, Section 15364.5 of the California Code of Regulations defines GHGs to include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of GHG emissions, accounting for approximately half of GHG emissions globally. Industrial and commercial sources are the second largest contributors of GHG emissions with about one-fourth of total emissions.

California has passed several bills and the Governor has signed at least three executive orders regarding greenhouse gases. GHG statues and executive orders (EO) include AB 32, SB 1368, EO S-03-05, EO S-20-06 and EO S-01-07.

AB 32 is one of the most significant pieces of environmental legislation that California has adopted. Among other things, it is designed to maintain California’s reputation as a “national and international leader on energy conservation and environmental stewardship.” It will have wide-ranging effects on California businesses and lifestyles as well as far reaching effects on other states and countries. A unique aspect of AB 32, beyond its broad and wide-ranging mandatory provisions and dramatic GHG reductions are the short time frames within which it must be implemented. Major components of the AB 32 include:

- Requires the monitoring and reporting of GHG emissions beginning with sources or categories of sources that contribute the most to statewide emissions.
- Requires immediate “early action” control programs on the most readily controlled GHG sources.
- Mandates that by 2020, California’s GHG emissions be reduced to 1990 levels.
- Forces an overall reduction of GHG gases in California by 25-40%, from business as usual practices by 2020.
- Dictates that any local initiatives must complement efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminants.

Statewide, the framework for developing the implementing regulations for AB 32 is under way. Maximum GHG reductions are expected to derive from increased vehicle fuel efficiency, from greater use of renewable energy and from increased structural energy efficiency.

In 2006, the California State Legislature adopted Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006. AB 32 requires CARB, to adopt rules and regulations that would achieve a GHG emissions cap which was phased in starting in 2012. On January 1, 2017, AB 52 was revised to include a statewide GHG emission reduction of 40 percent below the State GHG emission limit no later than December 31, 2020.

Per CEQA guidelines, new project emissions are treated as standard emissions, and air quality impacts are evaluated for significance on an air basin or even at a neighborhood level. Greenhouse gas emissions are treated differently as the perspective is global, not local. Therefore, emissions for certain types of projects might not necessarily be considered as new emissions if the project is primarily population driven. Many gases make up the group of pollutants that are believed to contribute to global climate change. However the three gases that are currently evaluated are Carbon dioxide (CO₂) Methane (CH₄) and Nitrous oxide (N₂O). GHGs emissions were evaluated using SCAQMD’s Off-Road Mobile Source Emissions Factors (2017), Emission Factors for On-Road Heavy-Heavy Duty Diesel Trucks (2017), and California Climate Action Registry General Reporting Protocol, 2009I; Table A9-8-C SCAQMD Handbook; Climate Leaders EPA, Section 3, Table 2.

Impact Analysis

a) *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Less Than Significant. Model results for GHG emissions related to the Proposed Project are shown in Tables 4, 5 and 6. The construction activities are again shown in three categories, as explained in Section III. A threshold of 3,000 MTCO_{2e} per year has been adopted by SCAQMD for determining a project’s potential for significant impact to global warming for non-industrial projects (Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold, SCAQMD, October 2008).

**Table 2
 Greenhouse Gas Construction Emissions
 Channel Earthwork Activities
 MT Per Year**

Source/Phase¹	CO₂	CH₄	N₂O¹
Loader/Backhoe	22.4	0.0	0.0
Bulldozer	80.3	0.2	0.0
Grader/Excavator	44.7	0.0	0.0
Misc. Construction Eq.	41.3	0.0	0.0
Total in MT Per Year	188.7		
Total CO_{2e} Per Year	190.0		
SCAQMD Threshold	3,000		
Significant	No		

Source: Emission Factors for On-Road Heavy-Heavy Duty Diesel Trucks (2017)
¹ California Climate Action Registry General Reporting Protocol, 2009I;
 Table A9-8-C SCAQMD Handbook; Climate Leaders EPA, Section 3, Table 2
² Emission Factors for On-Road Heavy-Heavy Duty Diesel Trucks (2017)
 Note: 84 day construction schedule

As shown in Table 2 GHG emissions related to the proposed project are not anticipated to exceed the SCAQMD GHG emissions threshold. Therefore, impacts are anticipated to be less than significant.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant. The Project will occur along an approximately 1.7 mi long reach of Plunge Creek with the primary goals of: 1) increasing the area of suitable habitat for the federally listed as endangered San Bernardino kangaroo rat (SBKR) and other sensitive species; and 2) increasing groundwater recharge opportunities without increasing the risk of flooding or erosion on non-SBVWCD owned or managed land. There are no existing GHG plans, policies, or regulations that have been adopted by CARB or SCAQMD that would apply to this type of emissions source. It is possible that CARB may develop performance standards for Project-related activities prior to Project construction. In this event, these performance standards would be implemented and adhered to, and there would be no conflict with any applicable plan, policy, or regulation; therefore, impacts would be less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		X		
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?			X	
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?		X		

Environmental Setting

State and Federal databases were reviewed to identify hazardous waste facilities including Federal Superfund sites, State Response sites, Voluntary Cleanup sites, School Cleanup sites, Permitted Operating sites, Corrective Action sites, and Tiered Permit sites within or adjacent to the Project.

The Project Area is not designated as a high fire zone by the City of Highland or CalFire.

The Redlands Municipal Airport, a small craft public airport, is located approximately 1.5 miles north of the Plunge Creek project. The Project activities are located approximately 3 miles east of the San Bernardino

International Airport (SBIA). The City of Highland has designated the Project activity area as within the SBIA Airport Overlay Area E - Airport Influence Zone - Negligible Risk Level.

Impact Analysis

a) *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

Less Than Significant. Some hazardous materials that could be used during the Project construction and operation and may include gasoline, diesel fuel, oil, solvents, and lubricants associated with heavy equipment and other vehicles used for operations and maintenance activities. These materials will be transported, used, and disposed of in accordance with applicable laws, regulations, and state and local protocols designed to protect the environment, workers, and the public. No acutely hazardous materials (as defined in Title 22 Cal. Code Regs. § 66260.10) will be used for the project. Therefore, potential impacts associated with the routine transport, use, or disposal of hazardous materials will be less than significant.

b) *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

Less Than Significant With Mitigation Incorporated. Limited quantities of hazardous materials will be used during construction including gasoline, diesel fuel, oil, solvents, and lubricants associated with the heavy equipment and vehicles and used for operation and maintenance activities. Reasonably foreseeable upset and accident conditions may include minor spills and/or drips. However, SBWCD contractors and employees are trained to properly prevent and clean up minor spills, as well as familiar with protocols to manage larger spills should they occur. Therefore, the impact of risk of upset by a potential release of hazardous waste is less than significant due to the limited quantities used. However, to ensure less than significant impacts will occur, **Mitigation Measure HAZ-1** and **HAZ-2** will be implemented. Mitigation measures are located at the end of this section.

c) *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

Less Than Significant. There is no existing or proposed school within one-quarter mile of the Project site. Therefore, there is no impact.

d) *Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

No Impact. The Project area has been a natural stream channel for decades. There are no sites that are included on a list of hazardous material sites compiled pursuant to Government Code 6596.5 in the construction area or adjacent to the construction area.

e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?*

Less Than Significant. The Redlands Municipal Airport lies approximately 1.5 miles north of the Project area and approximately 3 miles east of the SBIA. The City of Highland has designated that the Project activities will occur within the SBIA Airport Overlay Zone E - Airport Influence Zone E- Negligible Risk Level.

The construction activities are at grade and will not result in a safety hazard for those working or residing in the project area.

- f) *For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?*

No Impact. There are no private airstrips in the project area. Therefore, there is no impact.

- g) *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

Less Than Significant. The Project is located in an undeveloped area, and all access roads are within the creek bed. The main point of access is Abbey Way, north of the project. Both the equipment staging area and the construction area in Plunge Creek are accessed off Abbey Way, where it ends at the northern boundary of Plunge Creek. Therefore, neither the Project nor the construction of the Project will physically interfere with any emergency response or evacuation plan. Therefore, the impact is less than significant.

- h) *Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

Less Than Significant With Mitigation Incorporated. The Project Area is not classified by the City of Highland or by CalFire as being an area with a high fire danger. However, the Project is located in an area where low-lying coastal sage scrub and ruderal vegetation exists, and sparks from equipment may ignite vegetation. The active stream channel is typically free of free of vegetation, and the network of bladed roads can act as a fire break in the event of a fire. The closest residential areas to the construction area lie approximately 0.4 mile north of the Project activities. Though there is a low risk of a fire from construction or operation of the Diversion structure, **Mitigation Measure HAZ-3** is incorporated to ensure the potential risk is less than significant. Mitigation Measures are located at the end of this section.

Mitigation Measure:

HAZ-1 The Department of Toxic Substances Control (DTSC) and San Bernardino County Fire Department Hazardous Materials Division shall be immediately notified in the event malodorous or discolored soils, liquids, containers, or other materials known or suspected to contain hazardous materials and/or contaminants are encountered during activities associated with the proposed project. Earthmoving activities in the vicinity of said material shall be halted until the extent and nature of the suspect material is determined by qualified personnel (as determined by the DTSC). The removal and/or disposal of any such contaminants shall be in accordance with all applicable local, State, and Federal standards.

HAZ-2 In the event of any identification of or spill of hazardous materials and/or contaminants in the construction area, the party whose activity resulted in the spill or release shall notify the SBVWCD of the location, extent, and nature of the spill or release. The SBVWCD shall thereupon assess the depth to groundwater in the area of the release, and if it appears that groundwater tables are high enough to create a potential for exposure of the groundwater table to the spill or release, will modify its recharge operations as much as feasible to prevent groundwater table intersection with the identified spill or release.

HAZ-3 During construction, all staging areas, welding areas, or areas slated for construction using spark-producing equipment will be cleared of dried vegetation or other material that could ignite. Spark arresting equipment shall be in good working order. SBVWCD shall require all vehicles and crews working at the project site to have access to functional fire extinguishers at all times. In addition, construction crews are required to have a spotter during welding activities to look out for potentially dangerous situations, including accidental sparks. The contractor also shall provide a safety plan for the implementation of additional protocols when the National Weather Service issues a Red Flag Warning. Such protocols should address smoking and fire rules, storage and parking areas, use of gasoline-powered tools, use of spark arresters on construction equipment, road closures, use of a fire guard, fire suppression tools, fire suppression equipment, and training requirements.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IX. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements?			X	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation onsite or offsite?			X	
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?			X	
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				X
f) Otherwise substantially degrade water quality?			X	
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?			X	
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	
j) Inundation by seiche, tsunami, or mudflow?				X

Environmental Setting

The Project area is located within the Santa Ana River Hydrologic Unit, within the hydrological boundary of the South Coast Hydrologic Region. The Santa Ana River watershed encompasses more than 2,800 square miles in northwestern Riverside County, Orange County, southwestern portion of San Bernardino County, and a small

portion of Los Angeles County. The watershed originates on the San Gorgonio Peak in San Bernardino County, drains southwesterly towards northwestern Riverside County and Orange County into the coastal plain and finally into the Pacific Ocean at Newport Beach. The principal tributaries include the San Timoteo, Reche, Mill, Plunge, City, East Twin, Waterman Canyon, Devil Canyon, and Cajon Creeks and University Wash from the San Bernardino Mountains. The Santa Ana River Hydrologic Unit is under the jurisdiction of the Santa Ana Regional Water Quality Control Board, Region 8.

The design goal of the project is to create hydrologic conditions that will enable natural fluvial processes to reoccupy historic floodplains and remnant distributary channels. The plan is to create hydraulic conditions sufficient enough to flush silt away from underlying sand, and to scour away non-native grasses, as well as deposit sand substrate to enable growth and establishment of native floodplain and alluvial fan habitats. As a result, suitable habitat for the SBKR, CAGN, spineflower and Santa Ana woolly-star will be expanded due to a complex channel morphology and network of tributary channels. The Project will also enhance groundwater recharge.

Impact Analysis

a) *Violate any water quality standards or waste discharge requirements?*

Less Than Significant. Construction is anticipated to occur over one month, during the drier months of the year, typically May through August, to reduce impacts to water and water quality. Construction consists of the regrading of native material and placement of rock in a manner to restore the historic flows in the braided channels. Construction will occur in a manner that direct storm flows into the main channel of Plunge Creek until the historical channel connections are completed. Therefore, no water will be within the construction area, and there will be a less than significant impact.

b) *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?*

Less Than Significant. The overall purpose is to restore flows into remnant channels of a historical floodplain area, increase the area of suitable habitat for the federally listed SBKR and other sensitive species, and to increase groundwater recharge opportunities without increasing the risk of flooding or erosion on non-SBVWCD owned or managed lands. As proposed, based on a 10-year modeling event, the Plunge Creek Conservation Project would result in approximately 18 acres of channel and (adjacent) floodplain restoration.

The project goals are consistent with the broader goals of the Santa Ana Watershed's One Water One Watershed (OWOW) program, including improving endangered species habitat, recharge of native surface water, enhancement of groundwater quality, working in a collaborative setting, and achieving cost effectiveness by working on SBVWCD -owned lands (Upper Santa Ana River Wash Plan HCP (2017)). Construction activities will utilize water for dust control. However, the amount of water is not significant and is readily available from local purveyors. Therefore, there is a less than significant impact to this criterion.

c) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation onsite or offsite?*

Less Than Significant. The purpose is to restore flows into remnant channels of a historical floodplain area, increase the area of suitable habitat for the federally listed SBKR and other sensitive species, and to increase

groundwater recharge opportunities without increasing the risk of flooding or erosion on non-SBVWCD owned or managed lands. The Project will alter the existing drainage pattern of Plunge Creek by restoring flows to the historic braids. However, the braids are natural stream courses, abandoned by sand build up in the main channel. The project will not cause erosion or siltation because it will restore the streambed to natural conditions. Therefore, there is a less than significant impact.

d) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?*

Less Than Significant. Refer to Response c), above. Less than significant impacts would occur.

e) *Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?*

No Impact. The Project activities are self-contained and do not rely on municipal storm water drainage systems, and no water drains to the municipal system. Therefore, there is no impact to this criterion.

f) *Otherwise substantially degrade water quality?*

Less Than Significant. The Project will restore flows into remnant channels of a historical floodplain area. The activity will not degrade water quality because it is designed to improve groundwater recharge and natural habitat.

g) *Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?*

No Impact. No housing construction is proposed as part of the Project. As a result, construction and operation of the Project would not place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Map or Federal Flood Insurance Map. Additionally, no other permanent habitable structures are proposed to be developed onsite. All construction equipment used for processing and hauling would be temporary and removed from the site when not in use. Therefore, no impacts would occur under this criterion as a result of the Project.

h) *Place within a 100-year flood hazard area structures which would impede or redirect flood flows?*

Less Than Significant. The Project is designed to utilize berming and placement of rock in strategic areas to restore historic flows in various braids throughout the existing floodplain. No project activities will impact the main flow of Plunge Creek.

i) *Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?*

Less Than Significant. According to the County of San Bernardino Hazards Overlay Map, the Project site is located within a dam inundation area from the Seven Oaks Dam. Failure of the dam that is so significant as to cause inundation of the Plunge Creek floodplain would be a far greater hazard than the failure of the Diversion structures. Therefore, there is a less than significant impact.

Additionally, due to the short duration of the construction of the Project, construction of the facility would also not increase the risk of loss, injury, or death as a result of flooding, including as a result of the failure of the levee or the dam. Therefore, there is a less than significant impact.

j) Inundation by seiche, tsunami, or mudflow?

Less Than Significant. The potential for the failure of the Seven Oaks Dam could create inundation by ground failure. The existing Project area is already exposed to hazards created by the dam, and construction of natural channels have no less exposure than the existing main flowpath of Plunge Creek. Therefore, the impact would be less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
X. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?			X	

Environmental Setting

The Project occurs in the natural floodplain located in the City of Highland.

The Project area occurs in an area of Plunge Creek that is identified in the Wash Plan HCP, prepared as part of the Incidental Take Permit (ITP) application submitted by the SBVWCD to the USFWS. A number of other entities wish to participate in the implementation of the HCP through a Certificate of Inclusion (COI, described below) in order to receive coverage for their planned projects. They include the City of Redlands, City of Highland, SBVWCD, East Valley Water District (East Valley), Cemex, Inc., and Robertson’s Ready-Mix. The San Bernardino County Flood Control District (SBCFCD) will pursue an independent Implementing Agreement (IA) and ITP under the HCP.

Impact Analysis

a) *Physically divide an established community?*

No Impact. The Project involves the regrading of historic braids within a natural floodplain. Therefore, there is no impact.

b) *Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?*

No Impact. The Project involves the regrading of historic braids within a natural floodplain. Therefore, there is no impact.

c) *Conflict with any applicable habitat conservation plan or natural community conservation plan?*

Less Than Significant. The Project is a Covered Activity under the Wash Plan HCP, and the SBVWCD is applying for an ICP with the USFWS and the CDFW. Therefore, there is a less than significant impact.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XI. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?			X	
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?			X	

Environmental Setting

The Project area is within the Santa Ana River watershed, which is known for some of the highest aggregate values in the State of California (City of Highland, March 2006).

The historical frequent flooding of the Santa Ana River has created a high quality aggregate resource throughout the entire Santa Ana Wash. In 1987, the California Department of Conservation, Division of Mines and Geology, issued Special Report 143, Part VII, Classification of Sand and Gravel Resource Areas, San Bernardino Production-Consumption Region in which virtually all of the Santa Ana and Mill Creek areas are designated as a Class 2 Mineral Resource Zone (MRZ-2), (LSA, 2008).

Impact Analysis

a) *Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*

Less Than Significant. The Project will regrade natural sediments in a manner that will restore the historic braids throughout the Plunge Creek wash area. Mining is not proposed as a Project Activity. The proposed Project would not result in the loss of availability of mineral resources that would be of value to the region and the residents of the state. No mineral resources will be lost due to the project. Therefore, there will be less than significant impacts.

b) *Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*

Less Than Significant. The resources in the Santa Ana and Plunge Creek project areas are identified as having a high value. The purpose of the Project is to restore natural historic braided channels and reuse the native materials within the wash bed. Therefore, there will be no loss of availability of the mineral resources in Plunge Creek.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XII. NOISE: Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?			X	
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

Environmental Setting

Noise is generally described as unwanted sound. Sound is a physical disturbance in a medium, such as air, that is capable of being detected by the human ear. Sound waves in air are caused by variations in pressure above and below the static value of atmospheric pressure. The unit of sound pressure ratio to the faintest sound detectable to a person with normal hearing is called a decibel (dB) on a logarithmic scale. The “pitch” (high or low) of the sound is a description of frequency, which is measured in Hertz (Hz). Most common environmental sounds are a composite of frequencies. A normal human ear can usually detect sounds within frequencies from 20 to 20,000 Hz. However, humans are most sensitive to frequencies in the range of 500 to 4,000 Hz.

Certain frequencies are given more “weight” during assessment because human hearing is not equally sensitive to all frequencies of sound. The A-weighted decibel (dBA) scale corresponds to the sensitivity range for human hearing. Noise levels capable of being heard by humans are measured in dBA. A noise level change of 3 dBA or less is barely perceptible to average human hearing. However, a 5 dBA change in noise level is clearly noticeable. A 10 dBA change is perceived as a doubling or halving of noise loudness, while a 20 dBA change is considered a “dramatic change” in loudness.

Sound from a source spreads out as it travels away from the source, and the sound pressure level diminishes with distance. Individual sound sources are considered “point sources” when the distance from the source is large compared to the size of the source (e.g., construction equipment, and turbines). Sound from a point source

radiates hemispherically, which yields a 6 dB sound level reduction for each doubling of the distance from the source. If the sound source is long in one dimension, the source is considered a “line source,” (i.e., roadways and railroads). Sound from a line source radiates cylindrically, which typically yields a 3 dB sound level reduction for each doubling of the distance from the source.

The metrics for evaluating the community noise environment are based on measurements of the noise levels over a period of time. These metrics are used in order to characterize and evaluate the cumulative noise impacts. The Community Noise Equivalent Level (CNEL) represents a 24-hour A-weighted sound level average from midnight to midnight, where sound levels during the evening hours of 7:00 p.m. to 10:00 p.m. have an added 5 dB weighting, and nighttime hours of 10:00 p.m. to 7:00 a.m. have an added 10 dB weighting.

Noise standards typically apply to permanent activities. The recommended noise exposure levels are established for permanent noise sources and receptors where noise can be generated over a 24-hour period with penalties applied for permanent noise generated during the night time hours. Construction related noise is short term and generally considered a nuisance. Construction noise is generally not of sufficient magnitude that is considered health threatening.

The nearest residences exist approximately 0.5 mile north of the Project activities.

Impact Analysis

a) *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Less Than Significant. The nearest residence is approximately 0.5 mile north of the proposed Project activities. In compliance with Section 8.50.050 of the City of Highland’s Noise Ordinance, all grading and maintenance-related activities will be undertaken in between the hours of 7:00 a.m. and 10:00 p.m. Sunday through Saturday. Project activities will be undertaken within the hours consistent with the City of Highland’s regulations. Therefore, noise generated by the heavy equipment will not violate City ordinances standards or requirements. There is no noise associated with the operations of the facility because the gates are operated manually.

b) *Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?*

Less Than Significant. It is anticipated that the proposed Project would not involve pile-driving activities typically associated with ground-borne vibration. The nearest sensitive receptors include the residential area located approximately 0.5 mile north of the site. Trucks and heavy equipment are anticipated to have low to no impact on the residences.

c) *A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?*

No Impact. The Project is to restore existing channel braids within a natural floodplain. The Project will not introduce new noise levels or generate a substantial increase in permanent noise. Noise associated with construction activities would be short-term and not represent an increase in permanent noise.

d) *A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?*

Less Than Significant. The Project is to restore existing channel braids within a natural floodplain. There will be short-term generation of noise during construction activities, but it is not substantial, and the nearest sensitive receptor is approximately 0.5-mile from the Project activities. Therefore, the impact is less than significant.

e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

Less Than Significant. The Redlands Municipal Airport, a small craft public airport, is located approximately 1.5 mile north of the Plunge Creek activities. The airport operations will not expose construction personnel or residents in the area to unacceptable noise levels.

f) *For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?*

No Impact. There are no private airstrips in the vicinity of the Project. Therefore, there is no impact.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIII. POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

Environmental Setting

The overall purpose is to restore flows into remnant channels of a historical floodplain area, increase the area of suitable habitat for the federally listed SBKR and other sensitive species, and to increase groundwater recharge opportunities without increasing the risk of flooding or erosion on non-SBVWCD owned or managed lands. The project does not involve housing, or the construction of structures for housing.

Impact Analysis

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact. The Project is designed to promote positive drainage and groundwater recharge. The SBVWCD is exercising its purpose and right to recharge the groundwater, which does not induce growth. Therefore, the Project does not indirectly induce an increase in population.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. The Project will occur within the footprint of the existing creek, and does not require new or existing housing. Therefore, the proposed Project will not displace any housing, or require the construction of replacement housing.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. The construction will be performed within an existing stream by workers who live in the area, therefore, the Project will not displace people or require the construction of new or replacement housing.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIV. PUBLIC SERVICES: a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:			X	
Fire protection?			X	
Police protection?			X	
Schools?			X	
Recreation/Parks?			X	
Other public facilities?			X	

Environmental Setting

The Project is located in the City of Highland, which provides public services to the area. All Project activities will occur within the natural channel.

Impact Analysis

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- a) *Fire protection?*
- b) *Police Protection?*
- c) *Schools?*
- d) *Recreation/Parks?*
- e) *Other Services?*

Less Than Significant. The proposed project is not located within an area designated as a high fire risk. The possibility exists for a work-related injury, but this type of occurrence is considered to be rare, and therefore, not create a substantial need for fire protection in the area. The work does not impact schools, or cause the need for new schools. The project will not utilize parks or impact park lands. There are no other public services that would be impacted by this project. Therefore, the impact is less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XV. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

Environmental Setting

The Project activities will occur within an approximately 203-acre area within Plunge Creek wash where there currently is a substantial amount of degraded native habitat in a historical floodplain area. Occasional users of the floodplain include hikers and equestrian.

Impact Analysis

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. Implementation of the proposed Project does not include the development of residential or other land uses that would cause a substantial increase in the use of existing neighborhood and regional parks or other recreational facilities. Substantial physical deterioration of local recreational facilities is not anticipated as a result of the proposed Project. There is no impact to this criterion.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact. The proposed Project does not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. There is no impact to this criterion.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVI. TRANSPORTATION / TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			X	
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			X	
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e) Result in inadequate emergency access?			X	
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				X

Environmental Setting

The Project will occur in an existing floodplain and will regrade current and historic wash patterns. The Project area is generally accessed off of Abbey Way in the City of Highland.

Impact Analysis

a) *Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?*

Less Than Significant. The Project activities are not located on major roadways. The main access to the structure is via Abbey Way and then onto dirt roads into the wash area where the work will be performed.

Construction equipment will travel primarily on Greenspot Road and use several local roads to access Abbey Way. The wash area is accessed at the end of Abbey Way. Construction equipment transport will be short-term and temporary and will not require any road closures or other roadway obstructions.

Therefore, because the Project activities will occur directly within the wash area, the Project will not conflict with any applicable plan, ordinance, or policy that establishes the performance of the system. Since the Project does not create any inconsistency with applicable plans, ordinance or policy that establishes measures of effectiveness, there is a less than significant impact.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Less Than Significant. Construction activities may require that heavy equipment periodically use Abbey Way to access the facilities. However, this will be periodic and not conflict with the congestion management program or significantly add to the existing traffic levels because few equipment and personnel are expected to be needed for a short period of time. Therefore, the project will not conflict with an applicable congestion management program. The impact is less than significant.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. The Redlands Municipal Airport, a small craft public airport, is located approximately 1.5 mile north of the Project activities. All Project activities will occur at or below grade. The Project will not result in a change of air traffic patterns, or increase traffic levels or create a change in location that results in safety risk.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The Project location is within an existing stream, not located on main roads or trails. The Project does not involve creating new roads or maintaining existing roads where there would be public access. Therefore, there is no impact.

e) Result in inadequate emergency access?

Less Than Significant. Construction equipment will utilize primarily Abbey Way to travel to and from the Project site. However, the equipment travels short distances, and therefore does not block or create inadequate emergency access for public response. The existing dirt and paved roads are designed for single vehicle directional access. Emergency access by the paved road to the Project is restricted by lane width only, but the Project site can be accessed by existing dirt roads. Emergency vehicles would only respond to the Project site in the event of an injury or fire. Therefore, there is a less than significant impact.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

No Impact. Project activities would occur in stream and on dirt and paved roads that are not accessible to the public. The Project site and its access roads are not identified as public transit, bicycle or pedestrian facilities. Therefore, the Project not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities and there is no impact.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
<p>XVII. TRIBAL CULTURAL RESOURCES:</p> <p>Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:</p>				
<p>a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or</p>				X
<p>b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.</p>				X

Environmental Setting

ICF completed a cultural resources records search to identify prehistoric or historic-period resources within one mile of the Project site (ICF, December 2016). Native American input began on the Wash Plan HCP in 2016 and in January 2018 through the AB 52 consultation process. The ICF report identified that no notable cultural features were known to exist in the Project area throughout the historic period. Based on these considerations, the ICF research concluded that no “historic properties” or “historical resources” are present within or adjacent to the Project area.

Impact Analysis

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k),

No Impact. There are no resources that have been identified as eligible for listing to the California Register of Historic Places. Therefore, there is no impact.

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

No Impact. There are no resources supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. Therefore, there is no impact.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVIII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
f) Be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X

Environmental Setting

The project is to regrade portions of Plunge Creek for water conservation and habitat conservation activities.

Impact Analysis

a) *Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.*

No Impact. The Project will not result in the generation of wastewater that will require treatment.

b) *Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

No Impact. No structures requiring wastewater collection or treatment services would be developed as part of the proposed Project. The proposed Project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. There is no impact to this criterion.

c) *Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

No Impact. The proposed Project would not contribute to the need for additional storm drainage facilities. No impact is identified.

d) *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

Less Than Significant. Construction activities may require water for some activities, including dust suppression. However, the SBVWCD's existing entitlements and resources would be adequate to support potential demand as it has historically. The Project would have sufficient water supplies to service construction needs, and no new or expanded entitlements would be needed.

e) *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

Less Than Significant. The proposed Project will utilize a wastewater "porta potty" vendor to accommodate construction employees. Construction activities are anticipated to have very few employees and can be serviced with existing wastewater resources. The impact is less than significant.

f) *Be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*

Less Than Significant. Construction activities may generate small quantities of solid waste, inert materials, and green waste. All waste would be properly disposed of in accordance with federal, state, and local statutes and regulations. Therefore, the impact is less than significant.

g) *Comply with federal, state, and local statutes and regulations related to solid waste?*

No Impact. All solid waste generated by the Project during construction activities would be handled in accordance with all applicable Federal, State, and local statutes and regulations. No impacts would occur under this criterion.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE:				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?		X		
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

SUBSTANTIATION:

a) *Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

Based on the native habitat components and known occurrence and persistence of sensitive species within or adjacent to the Project area, this project could result in impacts to these resources. Further, this project has potential to impact federally listed threatened or endangered species and its habitat. The goals of the proposed Project are to: 1) increase the area of suitable habitat for the special status species and sensitive species; and 2) increasing groundwater recharge opportunities without increasing the risk of flooding or erosion on non-SBVWCD owned or managed land. The purpose this initial study is to provide data in support of securing the required regulatory permits for such impacts to State or federally protected species, sensitive habitats, streambeds, waters of the U.S. and waters of the State. Mitigation measures are included in this document to address the potential impacts and reduce them to a less than significant impact level. With implementation of these measures, no significant adverse impacts to biological resources will result from project implementation. Similarly, no cultural resources with significant values were found in the project footprint. However, a potential exists to accidentally expose subsurface cultural resources during construction. Contingency mitigation measures are included in this document to address this potential impact and reduce it to a less than significant impact level. With implementation of the cultural resources mitigation measures (including paleontological impacts), no significant adverse impacts to cultural resources will result from project implementation.

b) *Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?*

There are no projects that have been identified to occur within Plunge Creek during the time of the Project activities. Potential impacts have been identified in the categories of cultural resources, geology and soils, and hazards and hazardous materials. The evaluation contained in this document determined that potential impacts to the environment can be reduced to a less than significant level with implementation of the identified mitigation measures. Based on data provided in this document, including the type of project proposed and its location, it is concluded that implementation of the proposed project will not result in impacts that are either individually or cumulatively considerable or significant when viewed in relation to past, present or probable future projects.

c) *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

The proposed project will not result in any identifiable substantial adverse effects on humans either directly or indirectly. The issues for which mitigation has been provided to control potential harm to humans are air quality, geology, hazards and hazardous materials. With implementation of the required mitigation no substantial adverse effect to humans will result from carrying out the proposed project.

Therefore, based on the findings in this Initial Study, the SBVWCD, acting as the CEQA lead agency for this proposed project, will process a Mitigated Negative Declaration (MND) as the appropriate CEQA environmental determination for the proposed project. The SBVWCD will issue a Notice of Intent to Adopt a Mitigated Negative Declaration and circulate the MND package for review for the required period. Following receipt of comments, the SBVWCD will compile responses to any comments and prepare a final MND package for consideration by SBVWCD. Based on the final MND package, the SBVWCD will consider whether implementation of the proposed project as defined in this document can proceed as determined by the SBVWCD at the completion of the review process.

If you or your agency comments on this proposed MND, you or your agency will be provided responses to comments and notified of the date of the SBVWCD's final review and decision. A decision by the SBVWCD to approve the MND would be based on all of the information available in the whole of the record before the SBVWCD at the conclusion of the CEQA environmental review process for this proposed project. Completion of the CEQA review process would allow implementation of the proposed project in accordance with any approved mitigation measures and conditions of approval for the project.

SECTION 5 - SUMMARY OF MITIGATION MEASURES

The following mitigation measures were identified to reduce impacts to less than significant:

BIOLOGICAL RESOURCES:

- BIO-1 The project site shall be surveyed for nesting birds by a qualified avian biologist within three (3) days prior to initiating the construction activities. If active nests are found during the pre-construction nesting bird surveys, a Nesting Bird Plan (NBP) will be prepared and implemented. At a minimum, the NBP will include guidelines for addressing active nests, establishing buffers, monitoring, and reporting. The NBP will include a copy of maps showing the location of all nests and an appropriate buffer zone around each nest sufficient to protect the nest from direct and indirect impact. The size and location of all buffer zones, if required, shall be determined by the biologist, and shall be based on the nesting species, its sensitivity to disturbance, and expected types of disturbance. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved buffer zone shall be marked in the field with construction fencing, within which no vegetation clearing or ground disturbance shall commence until the qualified biologist has determined the young birds have successfully fledged and a monitoring report has been submitted reviewed and approved by the SBVWCD
- BIO-2 Prior to ground disturbing activities, a qualified biologist should conduct a nocturnal and diurnal preconstruction survey for western spadefoot and California glossy snake within the fenced footprint. If either species is found they will be relocated outside of the work area.

CULTURAL RESOURCES:

- CUL 1 In the event that evidence of historic activities is unearthed during construction activities, work in the immediate vicinity of the find will be stopped and a qualified archaeologist will be contacted to assess the find and recommend appropriate mitigation. No disturbance shall occur in the vicinity of the find until the site is evaluated by the archaeologist and the find is recorded or treated per the recommendations of the qualified archaeologist.
- CUL-2 In the event that human remains are discovered, there shall be no disposition of such human remains, other than in accordance with the procedures and requirements set forth in California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98. These code provisions require notification of the County Coroner and the Native American Heritage Commission, who in turn must notify those persons believed to be most likely descended from the deceased Native American for appropriate disposition of the remains. Excavation or disturbance may continue in other areas of the project site that are not reasonably suspected to overlie adjacent remains or archaeological resources.

GEOLOGY AND SOILS

- GEO-1 The contractor will provide to the County of San Bernardino an Erosion Control Report (ECR) that will identify the Best Management Practices (BMPs) for managing the stockpiles. The BMPs may include but not be limited to the following:
- Locate stockpiles away from active drainage courses, drain inlets or concentrated flows of storm water.
 - For wind erosion control, apply water or other dust palliative to stockpiles. Smaller stockpiles may be covered as an alternative.
 - Place bagged materials on pallets under cover.
 - During the rainy season, non-active silty or highly erodible soil stockpiles will be covered with heavy plastic and the stockpile contained within a temporary perimeter sediment barrier, such as berms, dikes, silt fences, or sandbag barriers. A soil stabilization measure may be used in lieu of cover.
 - During the non-rainy season prior to the onset of rain, the silty or highly erodible stockpile should either be covered or protect them with temporary perimeter sediment barriers.
 - Year-round, active silty or highly erodible soil stockpiles will be protected with temporary linear sediment barriers prior to the onset of rain.
 - The main haul road will be graded and watered at least once per day, or as often as necessary to control dust as required by the South Coast Air Quality Management District (SCAQMD).

HAZARDS AND HAZARDOUS MATERIALS

- HAZ-1 The Department of Toxic Substances Control (DTSC) and San Bernardino County Fire Department Hazardous Materials Division shall be immediately notified in the event malodorous or discolored soils, liquids, containers, or other materials known or suspected to contain hazardous materials and/or contaminants are encountered during activities associated with the proposed project. Earthmoving activities in the vicinity of said material shall be halted until the extent and nature of the suspect material is determined by qualified personnel (as determined by the DTSC). The removal and/or disposal of any such contaminants shall be in accordance with all applicable local, State, and Federal standards.
- HAZ-2 In the event of any identification of or spill of hazardous materials and/or contaminants in the construction area, the party whose activity resulted in the spill or release shall notify the SBVWCD of the location, extent, and nature of the spill or release. The SBVWCD shall thereupon assess the depth to groundwater in the area of the release, and if it appears that groundwater tables are high enough to create a potential for exposure of the groundwater table to the spill or release, will modify its recharge operations as much as feasible to prevent groundwater table intersection with the identified spill or release.
- HAZ-3 During construction, all staging areas, welding areas, or areas slated for construction using spark-producing equipment will be cleared of dried vegetation or other material that could ignite. Spark arresting equipment shall be in good working order. SBVWCD shall require all vehicles and crews working at the project site to have access to functional fire extinguishers at all times. In addition, construction crews are required to have a spotter during welding

activities to look out for potentially dangerous situations, including accidental sparks. The contractor also shall provide a safety plan for the implementation of additional protocols when the National Weather Service issues a Red Flag Warning. Such protocols should address smoking and fire rules, storage and parking areas, use of gasoline-powered tools, use of spark arresters on construction equipment, road closures, use of a fire guard, fire suppression tools, fire suppression equipment, and training requirements.

SECTION 6 - HCP CONSTRUCTION AVOIDANCE AND MINIMIZATION MEASURES

Sediment Control

According to *Upper Santa Ana River Wash Plan HCP* (ICF, December 2016), Section 5.5, the following water quality minimization measures will be implemented.

- Construction activity and access roads will be minimized to the extent practicable in all drainages, streams, pools, or other features that could be under the jurisdiction of the USACE, State Water Board, and/or CDFW. If impacts on these features are identified, a formal jurisdictional delineation and permit applications to the regulatory agencies may be required.
- When stream flows must be diverted, the diversions will be conducted using sandbags or other methods requiring minimal instream impacts. Silt fencing or other sediment trapping materials will be installed at the downstream end of construction activity to minimize the transport of sediments off site. Settling ponds where sediment is collected will be cleaned out in a manner that prevents the sediment from reentering the stream. Care will be exercised when removing silt fences, as feasible, to prevent debris or sediment from returning to the stream.
- Erodible fill material will not be deposited into water courses. Brush, loose soils, or other similar debris material will not be stockpiled within the stream channel or on its banks.
- Covered Activities near to or within the HCP Preserve or other natural areas will incorporate plans to ensure that runoff discharged is not altered in an adverse way when compared with existing conditions, which includes landscape irrigation. Stormwater systems will be designed to prevent the release of sediments, toxins, chemicals, petroleum products, exotic plant materials, or other elements that might degrade or harm biological resources or ecosystem processes within the HCP Preserve.

Species Protection

The following excerpt from Section 5 of the *Upper Santa Ana River Wash Plan HCP* (ICF, December 2016) identifies species protection measures that will be implemented as part of The Plunge Creek Conservation Project.

Slender-horned Spineflower

- Covered Activities that will result in permanent impacts where the location has not yet been determined (e.g., new wells) will avoid occupied spineflower habitat. An exception can be made upon approval of the Wildlife Agencies if the Permittee or Participating Entity can demonstrate that (1) no alternative sites were feasible, (2) the impact will not result in the loss or compromise of the entire spineflower patch, and (3) the loss of plants will be fully mitigated.
- Prior to ground disturbance from Covered Activities in suitable spineflower habitat, surveys will be conducted if the area has not been surveyed within the last 5 years to determine if the plant is present. Surveys will be conducted in accordance with the CDFW protocols for surveying Special Status plant populations.

- If spineflower are detected during pre-project surveys, seeds will be collected for 4 years prior to ground disturbance. Seed collection and storage will be by an entity which has a Memorandum of Understanding with the USFWS to process and handle the seeds of endangered plant taxa.
- Surface soils will be removed and sequestered at the beginning of any ground disturbing construction or O&M activity where spineflower is present. If cryptogamic soil crust is also present, it will be harvested in blocks, preserved, and placed back on the site after construction. If the impacts are permanent, an alternate site in suitable habitat will be selected in consultation with a qualified botanist or restoration biologist. After the sequestered soil is returned to the site, it will be replanted with the previously collected spineflower seed over consecutive years following the ground disturbance. The timing and methods of planting will be determined by the Permittee in consultation with a restoration biologist and will incorporate adaptive management.
- The replanting site will be monitored and maintained (e.g., weed control) for 5 years or until the spineflower is considered to be re-established to target values established by the Preserve Management Committee. Maintenance weeding will continue after the restoration weeding as part of the annual maintenance program.
- No aggregate mining or other Covered Activities will be permitted in the spineflower contingency parcel (Section 11 between the existing quarries) until it has been determined the biological objective for establishing new, persistent spineflower patches (SHSF Objective 3) has been met. Upon meeting the performance standards in the objective, the Permittee will provide a report documenting success to the Wildlife Agencies for their review and approval. Upon approval of the report in writing, aggregate mining of the contingency parcel can commence.
- When Covered Activities will take place within 50 meters of known occurrences of spineflower, a temporary fence will be erected to protect them. A qualified botanist and/or biological monitor will monitor construction activities, maintain the markers limiting construction, and maintain the fence protecting the spineflower to prevent accidental disturbance.

Santa Ana River woolly-star

- New construction projects in occupied woolly-star habitat will be avoided if feasible. For projects where the exact location of the facility has not been determined the Permittee or Participating Entity must consider alternatives outside of occupied habitat. If an alternative in occupied habitat is selected, the Participating Entity must demonstrate to the Permittee and or Wildlife Agencies why it was not possible to locate the project in unoccupied habitat.
- Prior to ground disturbance from new construction and O&M activities in potentially suitable woolly-star habitat, surveys will be conducted if the area has not been surveyed within the last 5 years to determine if the plant is present. Surveys will be conducted in accordance with the CDFW protocols for surveying Special Status plant populations.
- If woolly-star is detected during pre-project surveys, seeds will be collected at the appropriate time (usually fall) prior to ground disturbance. Seed collection and storage will be by an entity that has a Memorandum of Understanding with the USFWS to process and handle the seeds of endangered plant taxa. In areas of temporary impacts, the seed will be replanted in the temporarily disturbed area. The seed planting time and location for seeds collected from permanent impact areas will be at the discretion of the land manager. The cost of seed collection, up to 2 years of storage, and planting will be borne by the relevant Permittee or Participating Entity.
- Sites where temporary impacts occur will be replanted with the previously collected woolly-star seed over consecutive years following the ground disturbance. The timing and methods of planting will be determined by the Permittee in consultation with a qualified botanist or restoration biologist with woolly-star experience, and will

incorporate adaptive management. If the impacts are permanent, an alternate site in suitable habitat will be selected by a qualified restoration biologist or botanist.

- The replanting site will be monitored and maintained (e.g., weed control) for 2 years or until the woolly-star is considered to be re-established to target values established by the HCP Preserve Management Committee. Maintenance weeding will continue after the restoration weeding as part of the annual maintenance program.
- When Covered Activities will take place within 50 meters of known occurrences of woolly-star, a temporary fence will be erected to protect them. A qualified botanist and/or biological monitor will monitor construction activities, maintain the markers limiting construction, and maintain the fence protecting the woolly-star, to prevent accidental disturbance.

San Bernardino Kangaroo Rat

- New construction in areas assessed as medium or high quality habitat for SBKR will be avoided if feasible. For projects where the exact location of the facility has not been determined the relevant Permittee or Participating Entity must consider alternatives outside of medium or high quality areas. If the selected alternative is in a medium or high quality area, the project proponent must demonstrate to the Permittee and the Wildlife Agencies why it could not be located in a lower quality habitat.
- If a ground-disturbing activity from new construction or O&M occurs in an area assessed as medium or high quality for SBKR, and is equal to or less than 3 acres, a temporary exclusionary fence meeting USFWS standards will be placed and maintained around the perimeter of the site. The area inside the fence will be trapped for SBKR by a qualified biologist during the 5 nights preceding the ground disturbance. Any trapped animals will be relocated to the nearest undisturbed habitat outside the construction area.
- When new construction or O&M activities with temporary ground disturbance occurs, including trenching, in SBKR habitat, the top 20 inches of soil/substrate will be segregated, preserved, and placed back in the same location and approximate configuration when the trench is backfilled. It will be compacted to within 5% of the average compaction of the natural substrate. If significant (over 30%) invasive weed cover is found, the topsoil will not be replaced in the top uncompacted fill but will be used for lower compacted backfill. In all cases the top 20 inches will be uncompacted and as suitable for SBKR burrowing as possible.
- For planned ground disturbance in areas assessed as medium or high-quality habitat for SBKR that are greater than 3 acres in size, the nearest suitable relocation site will be identified by a qualified biologist in consultation with the Permittee and the USFWS. The translocation site will typically be an area of trace or low-quality habitat with suitable substrate, which has recently been restored. Once the relocation site has been identified, exclusionary fencing will be erected, and the area inside the fence will be trapped by a qualified biologist during the 5 nights preceding construction. Temporary burrows will be constructed at the relocation site for relocated animals.
- Prior to grading dirt access roads, other than roads within mining operations areas, a qualified biologist will trap the road and 15 meters on either side during the 5 nights preceding the grading. Trapped animals will be held until the completion of grading and then returned to the location where they were trapped.
- A qualified biologist or biological monitor with SBKR expertise will be present when construction or ground-disturbing O&M activities that could result in take of SBKR occurs in, or within 100 meters of SBKR habitat which is classified as low, medium, or high habitat potential for SBKR.

Coastal California Gnatcatcher (suitable habitat on site)

- Covered Activities resulting in permanent impacts on gnatcatcher will be avoided if feasible. Where the exact location of the facility has not yet been determined (e.g., new wells) the relevant Permittee or Participating Entity

must consider alternatives outside of occupied habitat. If an alternative in nesting habitat is selected, the Permittee or Participating Entity must demonstrate to the Permittee and or the Wildlife Agencies why it was not possible to locate the project in non-nesting habitat. Participating Entities will provide information in their COI application substantiating a determination that locating their proposed project in non-nesting habitat was not possible.

- New construction and O&M activities will be avoided to the extent feasible during the gnatcatcher breeding season. If a Covered Activity resulting in significant vegetation disturbance takes place during the nesting season, February 15 to August 30, a qualified biologist will conduct pre-activity nest surveys. The area to be disturbed and a 500-foot buffer will be surveyed for 5 consecutive days to determine if gnatcatchers are nesting in or near the construction or operations and maintenance area. If gnatcatchers are nesting, a 300-foot buffer will be established and maintained between the Covered Activity and the nest area until nesting is completed. Noise within the buffer area will not exceed 60dB(A) Leq.

Migratory Birds

- If construction-related activities are to occur during the nesting season (February 1 through September 15), a qualified biologist will conduct a preconstruction survey of the proposed construction area and an appropriate buffer. This preconstruction survey will commence no more than 72 hours prior to the onset of construction. If an active nest is observed, an appropriate buffer will be established until nesting is completed.

SECTION 7 - REFERENCES

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<http://www.ci.highland.ca.us/Downloads/Files/zoning%20110812.pdf>

City of Highland, March 2006, *City of Highland General Plan, Public Health & Safety Element*.

Dudek, February 2007. *Existing Biological Conditions Report for the Upper Santa Ana River Habitat Conservation Plan*.

ICF, April 2016. *Plunge Creek Conservation Project 30% Design Report*.

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ICF, December 2016. *Cultural Resources Section 106 Compliance Report for the Plunge Creek Conservation Project*.

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San Bernardino Valley Water Conservation District, November 2008. *Upper Santa Ana River Wash Land Management and Habitat Conservation Plan Document*.

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URS, April 2009, *Final Administrative Draft, Draft Environmental Impact Statement for the Proposed Santa Ana River Wash Land Use Plan Amendment and Land Exchange*.

FIGURES

APPENDICES

Appendix A
Plunge Creek Conservation Project 30% Design Report

Appendix B
Response to Comments
(reserved)