

ENVIRONMENTAL ASSESSMENT and INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

Super Creek Quarry Expansion Revised BLM Plan of
Operations and Amended Reclamation Plan No. 137



June 2014

U. S. Department of the Interior
Bureau of Land Management
Palm Springs-South Coast Field Office
1201 Bird Center Drive
Palm Springs, CA 92262

California Department of Conservation
State Mining and Geology Board
801 K Street, Suite 2015
Sacramento, CA 95814

**SUPER CREEK QUARRY EXPANSION
REVISED BLM PLAN OF OPERATIONS AND
AMENDED RECLAMATION PLAN NO. 137**

**Environmental Assessment
and
Initial Study/Mitigated Negative Declaration**

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**SUPER CREEK QUARRY EXPANSION
REVISED BLM PLAN OF OPERATIONS
AND AMENDED RECLAMATION PLAN NO. 137
ENVIRONMENTAL ASSESSMENT
AND INITIAL STUDY/MITIGATED NEGATIVE DECLARATION**

1 INTRODUCTION/PURPOSE AND NEED FOR PROPOSED ACTION

1.1 Introduction

Painted Hills Mining Company (Painted Hills) currently operates the Super Creek Quarry (CA ID#91-33-0003) on federal lands managed by the U.S. Department of the Interior, Bureau of Land Management (BLM). The quarry is located approximately 2 miles north of Interstate 10 (I-10) in the western portion of the City of Desert Hot Springs in Riverside County, California. The quarry is a source of decorative rock known as “Palm Springs Gold.” Current mining and processing operations are located on approximately 23.8 acres of the Super Creek Quarry site. Inactive waste material slopes cover approximately 27 acres on the east side of the site. Access to the site is from an unpaved haul road, approximately 3 miles long, which intersects with the Whitewater Cutoff.

The Super Creek Quarry (previously known as Painted Hills Mine) has been in operation since the 1950s and is situated on up to 10 placer and lode mining claims controlled by Painted Hills. The claims have been operating under the BLM’s regulations pertaining to “locatable” minerals.¹

In January 2013, Painted Hills submitted the Super Creek Quarry Expansion – Revised BLM Plan of Operations and Amended Reclamation Plan No. 137 (Plan of Operations/Amended Reclamation Plan) in accordance with the BLM’s surface management regulations (Title 43, Code of Federal Regulations, Section 3809). Under the proposed Plan of Operations/Amended Reclamation Plan, Painted Hills would expand the quarry site, establish new waste placement areas, construct additional sedimentation basins, and amend its current reclamation plan to accommodate these changes in accordance with the California Surface Mining and Reclamation Act of 1975 (SMARA). The Proposed Action would add approximately 33.4 acres to the active quarry site. An additional 21 acres along the west and south boundaries would be added to the quarry site but would remain undisturbed. In total, the expanded quarry site would cover 105.2 acres.

Approval of the Plan of Operations/Amended Reclamation Plan would allow extraction, processing, and transport of rock from the quarry site to continue for an estimated 25 years. The proposed quarry expansion will require BLM approval and therefore must meet the requirements for environmental review under the National Environmental Policy Act of 1969 (NEPA). The amended reclamation plan also requires approval by the State Mining and Geology Board (SMGB) and is subject to review under the California Environmental Quality Act (CEQA). This Environmental Assessment and Initial Study/Mitigated Negative Declaration (EA-IS/MND) has been prepared to meet the environmental review requirements under NEPA and CEQA with the BLM and the SMGB serving as the federal and state lead agencies, respectively.

¹ Locatable minerals are minerals that may be “located” with a mining claim under the General Mining Law of 1872, as amended.

1.2 Purpose and Need for Action

Painted Hills is rapidly approaching exhaustion of locatable materials that can be extracted under its current plan of operations and reclamation plan at the Super Creek Quarry. Approval of the Plan of Operations/Amended Reclamation Plan (the Proposed Action for this EA-IS/MND) would allow Painted Hills to continue operations at the quarry for approximately 25 years. Approval of the amended reclamation plan would allow reclamation of the expanded quarry site in a manner consistent with SMARA requirements.

1.3 Lead Agency Responsibilities for Planning and Environmental Review

1.3.1 Bureau of Land Management

On lands open to location under the Mining Law, the BLM administers the surface of public land and federal subsurface mineral estate under the General Mining Law of 1872 (Mining Law) and the Federal Land Policy and Management Act of 1976 (FLPMA). The FLPMA also governs the BLM's administration of public lands not open to location under the Mining Law. The BLM's authority for materials sales and management of sales is founded on the following:

- Material Sale Act of 1947 (61 Stat. 681) authorized the BLM to dispose of materials including, but not limited to, sand, stone, gravel, and common clay on public lands through a sales system.
- Surface Resources Act of 1955 (69 Stat. 367) amended the Material Sale Act of 1947 to remove common varieties of sand, gravel, cinders, pumicite, and clay from the category of locatable minerals and placed them under the sales and management system of the Material Sale Act of 1947.
- Code of Federal Regulations Title 43 Part 3600 (43 CFR 3600) established the BLM's authority for managing contract sales of mineral materials. Section 3601.1 states, "The regulations in this part establish procedures for the exploration, development, and disposal of mineral material resources on the public lands, and for the protection of the resources and the environment. The regulations apply to permits for free use and contracts for sale of mineral materials."

The surface management regulations recognize that the BLM is required to comply with NEPA through preparation of an environmental document, in this case an EA, which analyzes the potential effects of the Proposed Action and any consultation required under other federal laws including the National Historic Preservation Act of 1966 (NHPA) and the Endangered Species Act (ESA).

1.3.2 State Mining and Geology Board

The Super Creek Quarry (previously known as Painted Hills Mine) has been in operation since the 1950s prior to SMARA of 1975 [mined lands prior to January 1, 1976, are not subject to SMARA's requirement of a reclamation plan for, or the reclamation of, such lands (California Public Resources Code Section 2776)]. Currently, Painted Hills operates under an approved BLM Plan of Operations (CA-39566) and Reclamation Plan No. 137. Originally, the quarry's Reclamation Plan No. 108 was approved by the County of Riverside in 1978, and this was replaced with Reclamation Plan No. 137, approved by the County in 1995. The mine area was annexed into the City of Desert Hot Springs in 2001. The City does not have a certified surface

mining ordinance pursuant to SMARA; therefore, the SMGB is the acting lead agency for the administration of SMARA and responsible for the review and approval of the amended reclamation plan.

As the lead agency for review and approval of the amended reclamation plan, the SMGB is also responsible for ensuring CEQA compliance prior to approval of the amended reclamation plan and is serving as CEQA lead agency for this EA-IS/MND.

1.3.3 Land Use Consistency

California Desert Conservation Area Plan

The Proposed Action is located within the California Desert Conservation Area (CDCA) Plan (1980, as amended), which defers to 43 CFR 3809 regulations and serves as the Resource Management Plan for the BLM California Desert District. The Proposed Action is within a multiple use area; therefore, the following goals for mineral exploration and development as stated on page 84 of the CDCA Plan Geology, Energy, and Mineral (G-E-M) Resources Element apply to the Proposed Action:

Goal 1. Within the multiple-use management framework, assure the availability of known mineral resource lands for exploration and development.

Goal 2. Encourage the development of mineral resources in a manner which satisfies national and local needs and provides for economically and environmentally sound exploration, extraction and reclamation processes.

In addition, the following objective in the G-E-M Resources Element in the CDCA Plan applies to the Proposed Action:

Objective 3. Continue to recognize ways of access and opportunities for exploration and development on public lands which are assessed to have potential for mineral resources of local and state importance. These are sand and gravel, limestone, gypsum, iron, specialty clays, and zeolites.

The Proposed Action is on public lands and would continue existing mining operations that produce a mineral commodity of local importance, and the site would be reclaimed for open space uses. Therefore, the Proposed Action is in conformance with the CDCA Plan.

Whitewater Canyon Area of Critical Environmental Concern Management Plan

A portion of the west side of the project site is within the Whitewater Canyon Area of Critical Environmental Concern (ACEC). The Whitewater Canyon ACEC Management Plan acknowledges the presence of the quarry operations at the site on pre-1995 claims, and that expansion to the west may occur. The management plan has established the following objective that is relevant to the Proposed Action:

Objective 3. Prohibit, or minimize through mitigation, surface-disturbing activities which would conflict with highly sensitive wildlife and Native American resources within the ACEC.

Implementation of the Proposed Action would not conflict with highly sensitive wildlife or Native American resources within the ACEC. Therefore, the Proposed Action is in conformance with the Whitewater Canyon ACEC Management Plan.

Coachella Valley Multiple Species Habitat Conservation Plan

The Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) is a regional multi-agency conservation plan that provides for the long-term conservation of ecological diversity in the Coachella Valley region of Riverside County. The conservation plan protects over 240,000 acres of open space and 27 species. The Super Creek watershed is within the Upper Mission Creek/Big Morongo Canyon Conservation Area. One sensitive wildlife species, desert tortoise, is identified in the CVMSHCP as being located in the vicinity of the project area. Measures to reduce potential impact on desert tortoise have been identified in this EA-IS/MND. With implementation of this measure, the Proposed Action would be in conformance with the CVMSHCP.

One natural community (Sonoran creosote bush scrub) is identified by the CVMSHCP as occurring in the immediate vicinity of the project area. The quarry is omitted from the boundaries of the natural community mapping (due to existing disturbance from mining). Therefore, the proposed project would not result in a reduction in the number of protected acreage, and there would be no inconsistency with the CVMSHCP with regard to Sonoran creosote bush scrub habitat.

Local Land Use Planning and Policy

The Proposed Action is on federal land within the corporate boundaries of the City of Desert Hot Springs. The City of Desert Hot Springs General Plan designates the site as Open Space/Mountain Reserve. The expansion of mining operations and implementation of the amended reclamation plan would not conflict with the designated use of the site because the site, as designated by the City, is already used for mining, and no new uses are proposed.

The mine operator has submitted an amended reclamation plan in conformance with SMARA for SMGB review. The plan outlines how the Proposed Action intends to meet the provisions of SMARA and associated state regulations. As part of processing the proposal for expanded mining operations and the amended reclamation plan, the SMGB would ensure that environmental review for the Proposed Action is in compliance with CEQA.

1.4 Scoping

An internal project scoping meeting with BLM interdisciplinary staff, the EA-IS/MND project manager, technical specialists, state lead agency staff (SMGB), and representatives of the project applicant was held on April 18, 2013. A meeting at the project site was conducted on June 26, 2013, attended by BLM staff and the EA-IS/MND project manager and technical specialists to refine areas of potential impact to be addressed in the EA-IS/MND. A listing of resource elements to be analyzed in the EA-IS/MND was submitted to BLM and SMGB staff for review and approval on August 4, 2013.

In compliance with Section 106 of the NHPA, CRM TECH requested a search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) on August 23, 2004, to

determine whether any Native American cultural resources were present within or near the vicinity of the Area of Potential Effect (APE). The response from the NAHC was received on August 31, 2004, and indicated that no Native American resources were known within the APE. However, the NAHC noted that the SLF is not exhaustive and provided a listing of Native American contacts that might have knowledge about the APE and about any sacred sites or resources not listed in the SLF. For this reason, letters to each of the listed tribal contacts were sent on September 2, 2004. Follow-up phone calls were then placed to all of the Native American contacts between September 15 and 28, 2004. A second NAHC SLF search was requested by CRM TECH on May 8, 2013. CRM TECH contacted tribal representatives between June 19 and July 12, 2013.

BLM staff informally consulted with U.S. Fish and Wildlife Service (USFWS) staff concerning triple-ribbed milk-vetch (a special-status plant species) on April 2, 2014, and received concurrence from the USFWS on May 7, 2014, that the Proposed Action may affect but is not likely to adversely affect the species.

1.5 **Resources to Be Analyzed**

The resources to be analyzed in this EA-IS/MND were based on a review of the Plan of Operations/ Amended Reclamation Plan and consultation with BLM and SMGB staff. Further analysis was performed to determine the extent to which the Proposed Action would have an adverse effect, if any, on each of those elements. The results of that analysis are included in Section 4 of this EA-IS/MND. The elements analyzed in Section 4 are:

- Air Quality and Climate Change/Greenhouse Gases;
- Cultural Resources;
- Drainage, Erosion, and Sediment;
- Geology, Soils, Mineral Resources, and Paleontology;
- Land Use;
- Traffic and Transportation;
- Vegetation;
- Visual Resources;
- Waste, Hazardous and Solid; and
- Wildlife.

Based on the preliminary evaluation, further analysis was determined to be unnecessary for the following environmental resource elements: Environmental Justice; Farm Lands (Prime or Unique); Fish Habitat; Floodplains; Forest and Rangelands (Healthy Forest Restoration Act [HFRA] projects only); Fuels and Fire Management; Human Health and Safety (Herbicide projects); Noise; Recreation; and Wild and Scenic Rivers. Justification for this determination is described further in Section 3.1 of this EA-IS/MND.

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2 ALTERNATIVES

2.1 Proposed Action

Under the Proposed Action, Painted Hills would expand its existing Super Creek Quarry mine and reclamation boundaries and amend its current reclamation plan to include that expansion. No expansion of annual production is proposed. Painted Hills currently mines decorative rock at the Super Creek Quarry and would enlarge the geographic area of mining operations to include two small hilltops just west of existing operations. The Proposed Action would also establish two new areas on the quarry site for the placement of waste materials generated by expanded operations (the Northwest and Southwest Waste Placement areas) and would increase the number of sedimentation basins.

A detailed description of the Proposed Action is contained in the *Super Creek Quarry Expansion Revised BLM Plan of Operations and Amended Reclamation Plan No. 137 (CA ID #91-33-0003)*, prepared by Lilburn Corporation (January 2013). This document is included with this EA-IS/MND as Appendix A of this document. The description of the Proposed Action contained in this EA-IS/MND is taken directly from the Plan of Operations/Amended Reclamation Plan unless otherwise noted.

As noted above, current mining and processing operations are located on approximately 23.8 acres of the Super Creek Quarry site. Inactive waste material slopes cover approximately 27 acres on the east side of the quarry site. With implementation of the Proposed Action, the expanded mining area, new waste placement areas, and the placement of additional sedimentation basins would add approximately 33.4 acres to the project site. In addition, 21 acres along the west and south boundaries would be added to the quarry site that would remain undisturbed. In total, the expanded quarry site would cover 105.2 acres. Table 2-1 lists the acreages of existing quarry operations and expanded acreages that would occur under the Proposed Action.

Table 2-1: Existing and Proposed Quarry Areas (Acres) Super Creek Quarry

	Quarry Area	East Tailings Slopes (Including Existing Basins and Channels)	Undisturbed Areas ⁽¹⁾	Total Area
Current Mine Site	23.8	27	—	50.8
Proposed Expansion	33.4 ⁽²⁾	0	21	54.4
Total Project Area	57.2	27	21	105.2

Source: Table ES-1 – Super Creek Quarry Expansion Revised BLM Plan of Operations and Amended Reclamation Plan No. 137. January 2013.

⁽¹⁾ These areas are to the west and south of the proposed quarry expansion and will not be mined or otherwise impacted, but may experience some boulder roll-down. Erosion control methods are planned as necessary.

⁽²⁾ Includes approximately one acre of additional basin and discharge pipeline from the Northwest Waste Placement Area.

Historically, the rate of mineral extraction at the Super Creek Quarry has varied from year to year, primarily due to fluctuations in market conditions. On average, however, approximately 50,000 tons of material is excavated and processed at the quarry. Of this amount, approximately 25,000 tons is waste material that would remain on-site, and 25,000 tons is saleable rock that is transported off-site. Under the Proposed Action, the method and rate of extraction would not change relative to current quarry operations. In addition, no substantive changes to the

processing, transport, or sale of material are proposed. Under the Proposed Action, Painted Hills would continue to excavate, crush, and sort decorative rock on the quarry site. In keeping with current practice, processed rock would be transported from the quarry to the company's stock yard approximately 3.5 miles to the southwest via a dirt access road with BLM right-of-way (CA-22568). The projected life of mining operations under the Proposed Action is 25 years.

2.1.1 Location and Access

The Super Creek Quarry is located approximately 2 miles north of I-10, east of the Whitewater River in the western portion of the City of Desert Hot Springs in Riverside County (see Figure 2-1). The quarry site is situated on public lands under the jurisdiction of the BLM on placer and lode mining claims controlled by Painted Hills in Section 36, Township 2 South, Range 3 East, SBBM and in assessor's parcel number 514-260-012. Painted Hills holds a Right-of-Way (ROW) Grant for the Super Creek haul road (CA-22568 signed in 1993 with a 30-year effective date) that is approximately 15,400 feet in length and 50 feet wide (see Figure 2-2). The haul road intersects with the Whitewater Cutoff approximately 2,000 feet east of the Whitewater retail facility located at 58645 Old Highway 60, Whitewater, California, where processed rock is stored and sold. Sold material is transported from the retail site to I-10 via Tipton Road.²

2.1.2 Existing Quarry Operations and Reclamation Activities

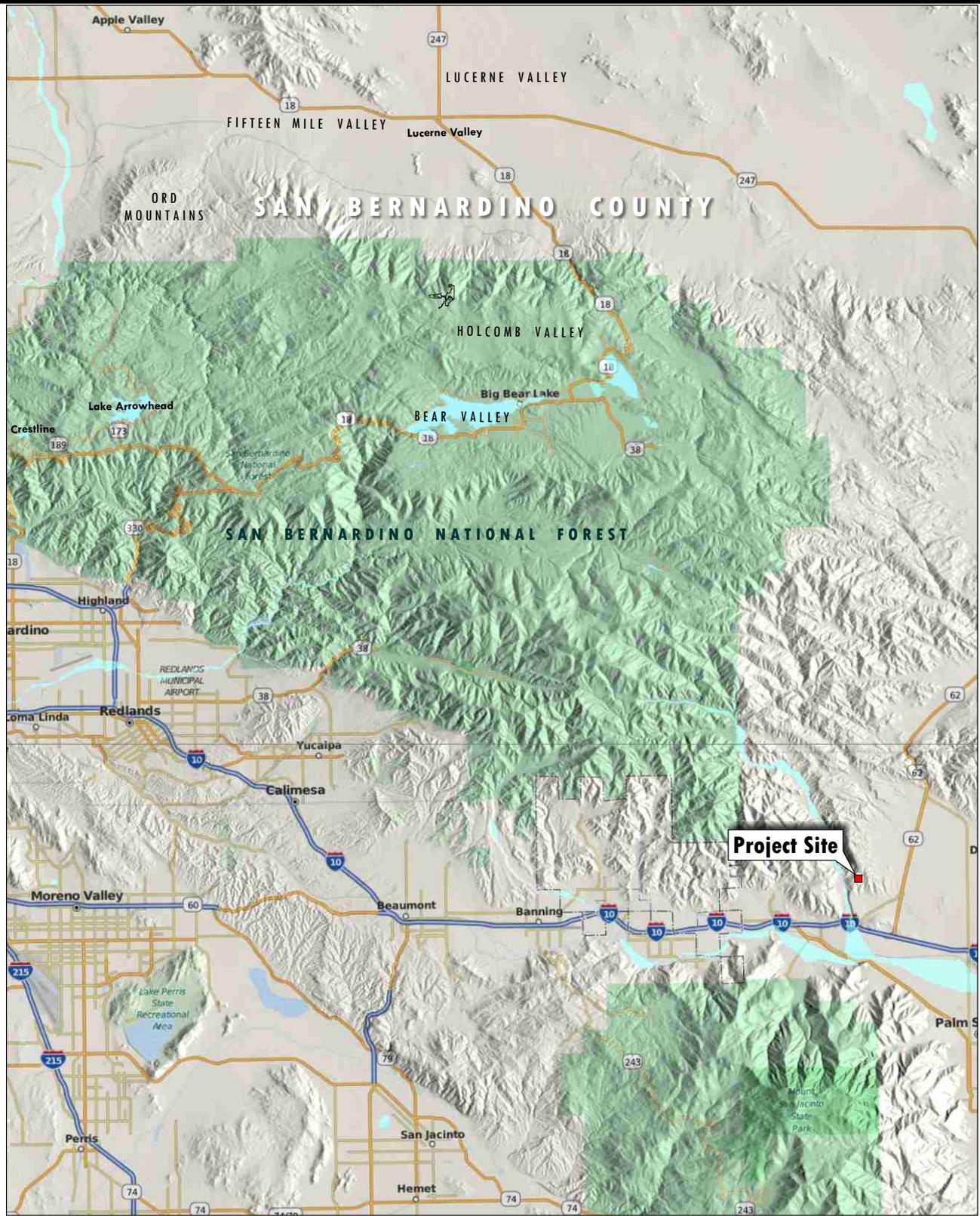
The Super Creek Quarry (previously known as Painted Hills Mine) has been in operation since the 1950s prior to SMARA. Figure 2-3 shows the extent of current quarry operations and the areas proposed for quarry expansion. As noted, current mining and processing operations are located on approximately 23.8 acres of the Super Creek Quarry site. Inactive waste material slopes cover approximately 27 acres on the east side of the quarry site. Sidecasting of waste on the east slopes ceased in March 2008. Reclamation of these slopes has been initiated in accordance with the approved reclamation plan (Reclamation Plan No. 137 [CA ID #91-33-0003]).

2.1.3 Proposed Mining and Processing Activities

The Proposed Action would implement the January 2013 BLM Plan of Operations/Amended Reclamation Plan (see Appendix A). Under the new Plan of Operations/Amended Reclamation Plan, Painted Hills would continue to use mining methods historically used at the quarry site, but would expand those operations into areas not included in the current plan of operations and reclamation plan. Upon approval of the Proposed Action, Painted Hills would develop five main features within the expanded quarry site. These features are shown in Figure 2-3 and include:

- northwest hilltop quarry;
- west-central hilltop quarry;
- southeastern pit area;
- Northwest Waste Placement Area; and
- Southwest Waste Placement Area.

² Based on on-site observations in June 2013 and review of aerial photograph publicly available on "Google Earth."



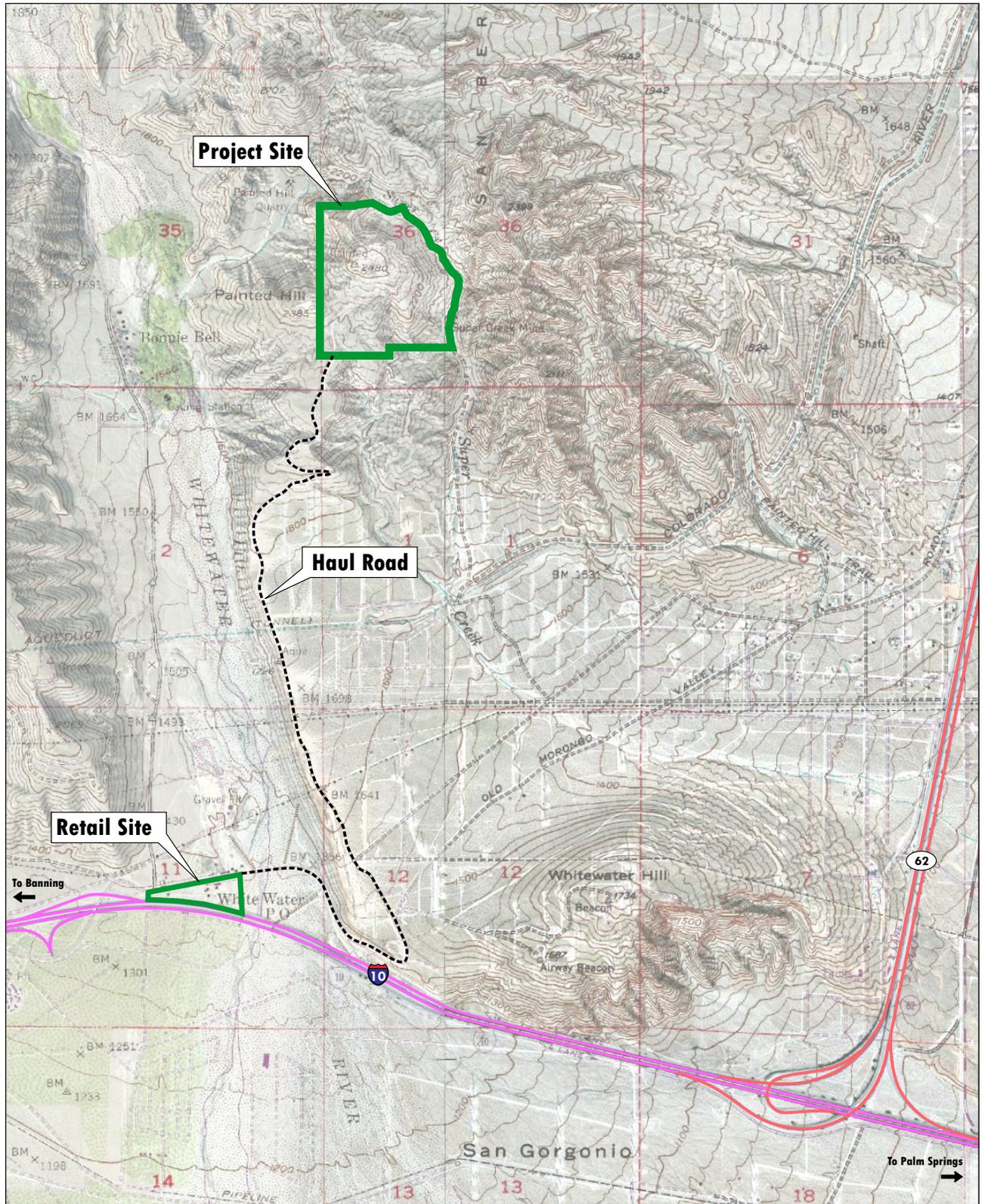
LEGEND

■ Project Site Location (Geographic Location)
Lat/Lon: 33° 57' 9.4827" N, 116° 37' 45.2692" W



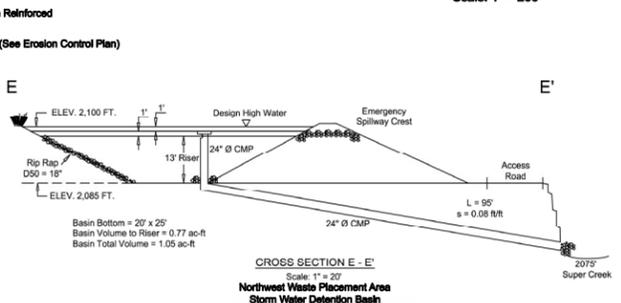
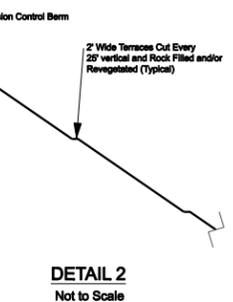
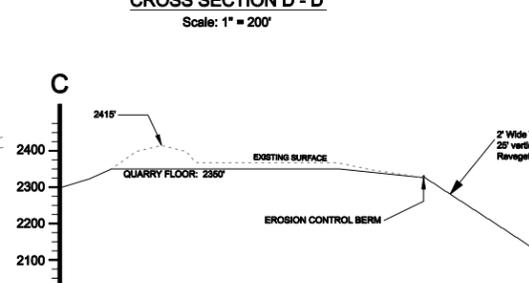
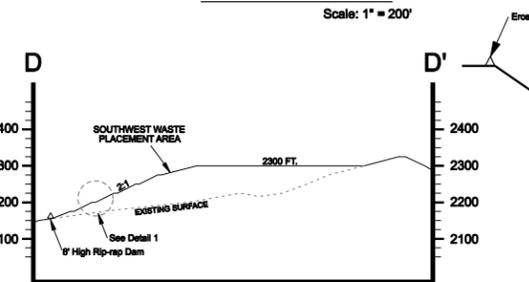
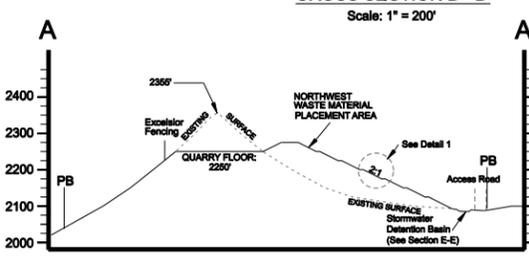
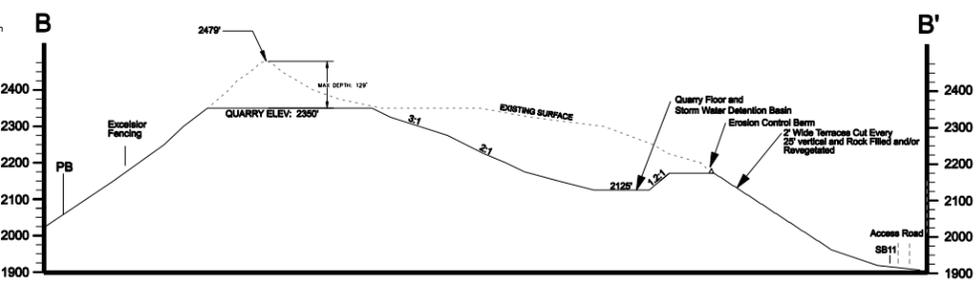
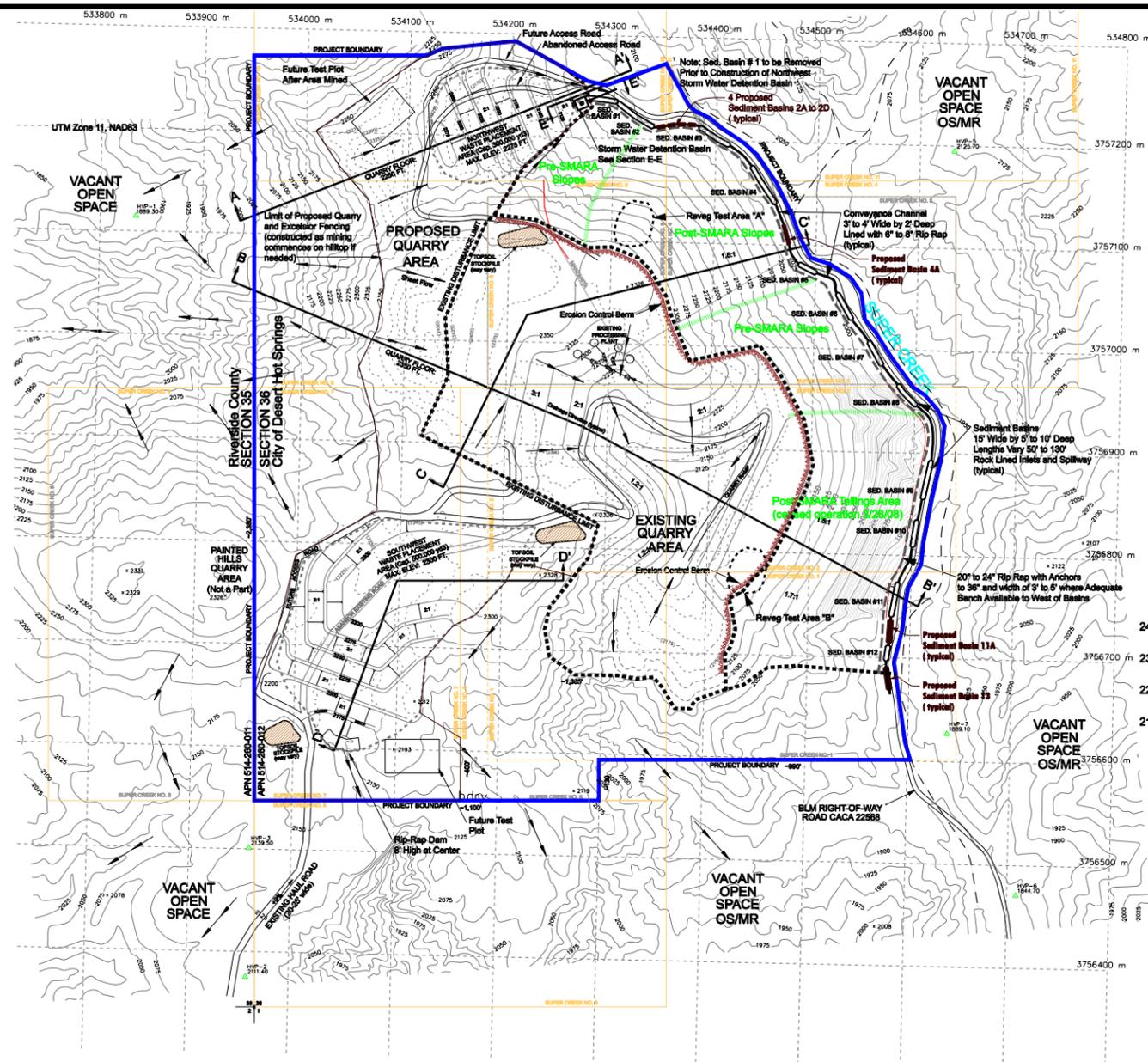
Source: Lilburn Corporation, 2013

Figure 2-1
Regional Location

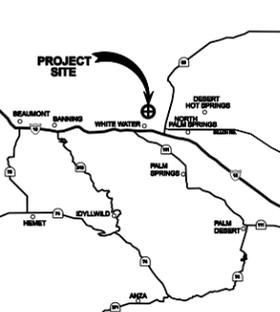


Source: Lilburn Corporation, 2013

Figure 2-2
Project Vicinity



LOCATION MAP

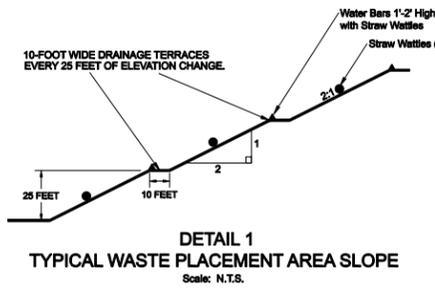


SITE INFORMATION

EXISTING QUARRY AREA:	23.8 Acres
Existing Eastern Waste Tailings Slopes:	27 Acres
PROPOSED EXPANSION AREA:	33.4 Acres
Undisturbed West Slopes:	12.0 Acres
Undisturbed South Area:	9.0 Acres
TOTAL PROJECT AREA:	105.2 Acres
ASSESSOR'S PARCEL NUMBER(s):	514-260-012-0001

LEGAL DESCRIPTION:
The possessory interest and all other rights, title and interest in and to land and improvements thereon described as Super Creek #1 through #7, Super Creek #10 and #11, and the Monzonite claims in Sections 35 and 36, Township 2 South, Range 3 East, SBM.

UTILITIES
Telephone - Mobile Service
Water - Offsite Well
Electricity - Diesel Generator
Gas - None
Sewer - Portable Toilets



LEGEND

- PROJECT BOUNDARY
- EXISTING DISTURBANCE LIMIT
- EXISTING CONTOUR
- DRAINAGE FLOW DIRECTION
- PB PROJECT BOUNDARY



Figure 2-3
Excavation Plan from the Plan of Operations

Due to the rocky nature of the topography, there is very little vegetation and overburden to be removed. As the proposed mining expansion area is incrementally expanded, any growth media would be stockpiled at up to three designated topsoil stockpile areas located near the quarry access road for subsequent use in reclamation activities, as shown in Figure 2-3. This stockpiled material would be covered with coarse aggregate or planted with a native vegetative cover as needed to prevent wind/water erosion. Any overburden waste rock encountered would be deposited into either the Northwest Waste Placement Area or the Southwest Waste Placement Area.

Under the Proposed Action, the mining of the decorative rock material would continue to be performed with dozers, excavators, and front-end loaders using what is referred to in the Plan of Operations/Amended Reclamation Plan as the “standard hillside and open pit method.” Using this method, material is ripped and pushed into raw stockpiles using an appropriately sized dozer. Front-end loaders or haul trucks then transport the raw material from the raw stockpiles to the on-site processing plant.

Raw material is processed using two small portable crushing and dry screening plants at the quarry site. This is the only type of ore processing that would be used throughout the 25-year life of the Proposed Action. The existing portable crushing and screening plant equipment consists of a primary jaw crusher and a double-deck screen, a cone crusher and a triple-deck screen, and assorted conveyors. The jaw crushing/screening plant is a mobile track-mounted unit that can be relocated to wherever the active excavation area is at any one time. The raw material is fed through the portable crusher and screened to produce the three-inch-minus (3" minus) “Palm Springs Gold” raw product. The 3" minus material is processed through a triple-deck screening plant and cone crusher to make the finished products for truck transport to Painted Hills’ stock yard. All other material that results from the crushing/screening operation is considered waste and, under the Proposed Action, would be deposited into one of the two designated waste placement areas. No washing of material is required or proposed. Chemicals or other hazardous materials are not required during processing of materials at this site.

The existing BLM right-of-way unpaved haul road would continue to be used for access to the quarry site. This export rate would result in an average of five to eight daily truck trips utilizing 20-ton over-the-road haul trucks operating on a five-day workweek. Peak truck traffic may be slightly higher at times; however, this would be a rare occurrence. The total weight (volume) of material to be extracted over the 25-year project life would be approximately 1.25 million tons (750,000 banked cubic yards [bcy]) including approximately 625,000 tons (417,000 bcy or 584,000 loose cubic yards [lcy]) of waste material, which would remain on-site in the two designated waste placement areas.

2.1.4 Equipment

Existing and planned operations at the Super Creek Quarry utilize a variety of mobile and portable stationary equipment to excavate, process, and transport material. A complete equipment list is included in the proposed Plan of Operations/Amended Reclamation Plan. Mobile equipment includes a variety of trucks, loaders, dozers, graders, and excavators. Processing equipment includes a 250-kilowatt generator, two screen plants, a mobile crushing plant, and a 3-foot cone crusher. Some of this equipment serves as back-up, and some is used at the stock yard adjacent to I-10. The current list of equipment is provided with the understanding

that the types and models of equipment would change due to replacement of old equipment and compliance with new diesel regulations.

2.1.5 Proposed Quarry Area Expansion

As illustrated in Figure 2-3, the new quarry areas would be mined to a maximum depth of approximately 130 feet in the hilltop area and approximately 150 feet in the pit area. The excavations would remove the top portion of two small hills to the west of, but contiguous with, the existing quarry operations. Excavations in the open pit area would follow the desired rock ore body to the east-southeast to form an open pit with 1.2H (horizontal):1V (vertical) slopes in bedrock to a depth of 2,125 feet above mean sea level (amsl).

The northwestern hill would be mined from approximately 2,355 feet amsl to a quarry elevation of 2,250 feet amsl. The west-central hill would be mined from approximately 2,480 feet amsl to a quarry floor of approximately 6 acres at an elevation of 2,350 feet amsl. From this quarry elevation, slopes would be cut at 3H:1V, gradually steepening to 1.2H:1V to form an irregular-shaped pit floor of approximately 1 acre at 2,125 feet amsl in the southeastern portion of the site (see Cross Section B-B' on Figure 2-3). The total acreage of the proposed quarry, the Northwest and Southwest Waste Placement areas, and additional sediment basins would be approximately 57.2 acres.

All proposed excavations would adhere to the recommendations included in the Revised Slope Stability Investigation (see Appendix A: Plan of Operations/Amended Reclamation Plan – Appendices H-1, H-2, and H-3). These mining slopes are entirely in bedrock with a static factor of safety of over 3 and a seismic factor of safety of over 2.

2.1.6 Waste Placement Areas

The planned Northwest Waste Placement Area would be located on approximately 4 acres with a capacity of approximately 300,000 cubic yards (cy) (see Cross Section A-A' in Figure 2-3). The waste placement area would be developed with 2H:1V slopes with 10-foot-wide benches at 25-foot vertical intervals.

The slopes would be protected with water bars and straw wattles with water directed to rock-lined down drains. No runoff would be allowed to flow over these slopes. Upon final grading completion, the slopes would then be revegetated as described in the Proposed Action's revegetation plan (see Section 2.1.9, "Revegetation" subheading).

In the southwestern portion of the site, waste material would be placed in the Southwest Waste Placement Area covering approximately 10 acres with a capacity of approximately 500,000 cy. The existing access road through this area would be realigned as the area is developed. The waste placement area would be constructed with 2H:1V slopes with 10-foot-wide benches at 25-foot vertical intervals (see Cross Section D-D' in Figure 2-3). The slopes would be protected with water bars and straw wattles with water directed to rock-lined down drains. The lower drainage would be detained by a proposed riprap dam. No runoff would be allowed to flow onto these slopes. Upon final grading completion, the slopes would then be revegetated as described in the Proposed Action's revegetation plan, below.

The construction of the two waste placement areas is described in detail in Appendix H-2 of the Plan of Operations/Amended Reclamation Plan (see Appendix A, page 23, under “Proposed Fill Slope Construction”), which includes recommendations to ensure that the waste placement area slopes are stable. These recommendations include the removal of all loose alluvial soils below the proposed slopes. In addition, fill would be placed, not dumped, and spread evenly in thin lifts with conventional heavy equipment. Moisture content should be at least 7 percent by weight, which is the typical post-plant moisture content of tailings, or as determined through laboratory testing. The addition of water during the placement process should facilitate compaction of the tailings.

2.1.7 Equipment Maintenance

The majority of any heavy equipment maintenance would be done off-site at Painted Hills’ repair facility at its retail site; however, unplanned repairs or minor maintenance may occur at the quarry site if required. Any waste oil generated at the project site would be collected and transported for off-site disposal by approved methods via properly trained and licensed personnel.

Painted Hills maintains an existing Business Plan, a hazardous materials inventory, and a Spill Prevention, Control, and Countermeasure (SPCC) Plan, which include employee training, record keeping, preventive maintenance, and best management practices (BMPs). These plans are submitted to the Hazardous Materials Management Division, the Certified Unified Program Agency (CUPA) for Riverside County, which is responsible for regulating hazardous materials business plans and hazardous waste. With approval of the Proposed Action, Painted Hills would be required to update these plans as necessary to reflect operational changes.

2.1.8 Water Use

Water use at the quarry site is primarily for dust suppression activities. Water is applied to roads, active stockpiles, and active mining areas. In addition, under the Proposed Action, water would be used on the waste placement areas to facilitate compaction. A 5,000-gallon water tank on-site feeds the water sprays on the screening plant. The amount of water used varies greatly depending on a variety of factors such as weather conditions and the quarry’s rate of production. Historically, however, less than 4,000 gallons per day (less than 4 acre-feet per year) has been required. All water used at the quarry is taken at an off-site well located at Painted Hills’ stock yard 3.5 miles south of the quarry. A water truck transports water to the project site daily as needed. Bottled drinking water is provided for employees and vendors.

2.1.9 Drainage Management and Erosion and Sedimentation Control

Water management and erosion and sedimentation control plans are described in detail in the Plan of Operations/Amended Reclamation Plan (see Appendix A, Section 11, “Mining,” and Figures 3 through 7 and Sheets 1 and 2 of the Plan of Operations/Amended Reclamation Plan). The background report that engineered the erosion control facilities is included as Appendix I-1 (“Amended Erosion Control Designs,” Stantec Inc., April 2009) and Appendix I-3 (Updated Run-off and Sediment Basins Capacities,” Joseph E. Bonadiman & Associates, Inc., January 2013) of Appendix A (Plan of Operations/Amended Reclamation Plan).

The Proposed Action has been designed to prevent erosion and/or sedimentation of adjacent properties due to on-site rainfall and runoff discharged from the project site. Velocity control devices would break up the area into small micro-drainages, allowing use of smaller control structures, greater infiltration rates, lowered erosion rates, and thus smaller sediment loads. Located on a hilltop, the quarry expansion area receives water flow only from precipitation that falls directly on the project site. The proposed quarry expansion would be carried out in a manner that would retain any on-site runoff within the excavation area. Erosion control measures (e.g., cross ditches, berms, waterbars, and straw wattles) are proposed where necessary to achieve this complete retention of runoff from the excavation areas. The proposed locations and design of these measures are shown in Figures 2-4 through 2-8.

Under the Proposed Action, erosion control features would continue to be incorporated and maintained through final successful reclamation and would include revegetation and erosion control measures such as straw wattles across the slopes, water bars armored with wattles, excelsior fencing, and detention basins below the waste placement areas as described in detail in Section 11 under Mining in the Plan of Operations/Amended Reclamation Plan (Appendix A), and in the “Amended Erosion Control Designs” (see Appendix A: Appendix I-1 and Appendix I-3). These activities are designed to mitigate adverse effects of erosion potentially caused by the Proposed Action.

Proposed on-site operations would continue to comply with a National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges associated with industrial activities and would employ stormwater best management practices (BMPs). NPDES compliance includes the elimination of unauthorized non-stormwater discharges, preparation of a stormwater pollution prevention plan (SWPPP), the monitoring of stormwater discharge requirements, and annual reporting to the Colorado River Basin Regional Water Quality Control Board (RWQCB).

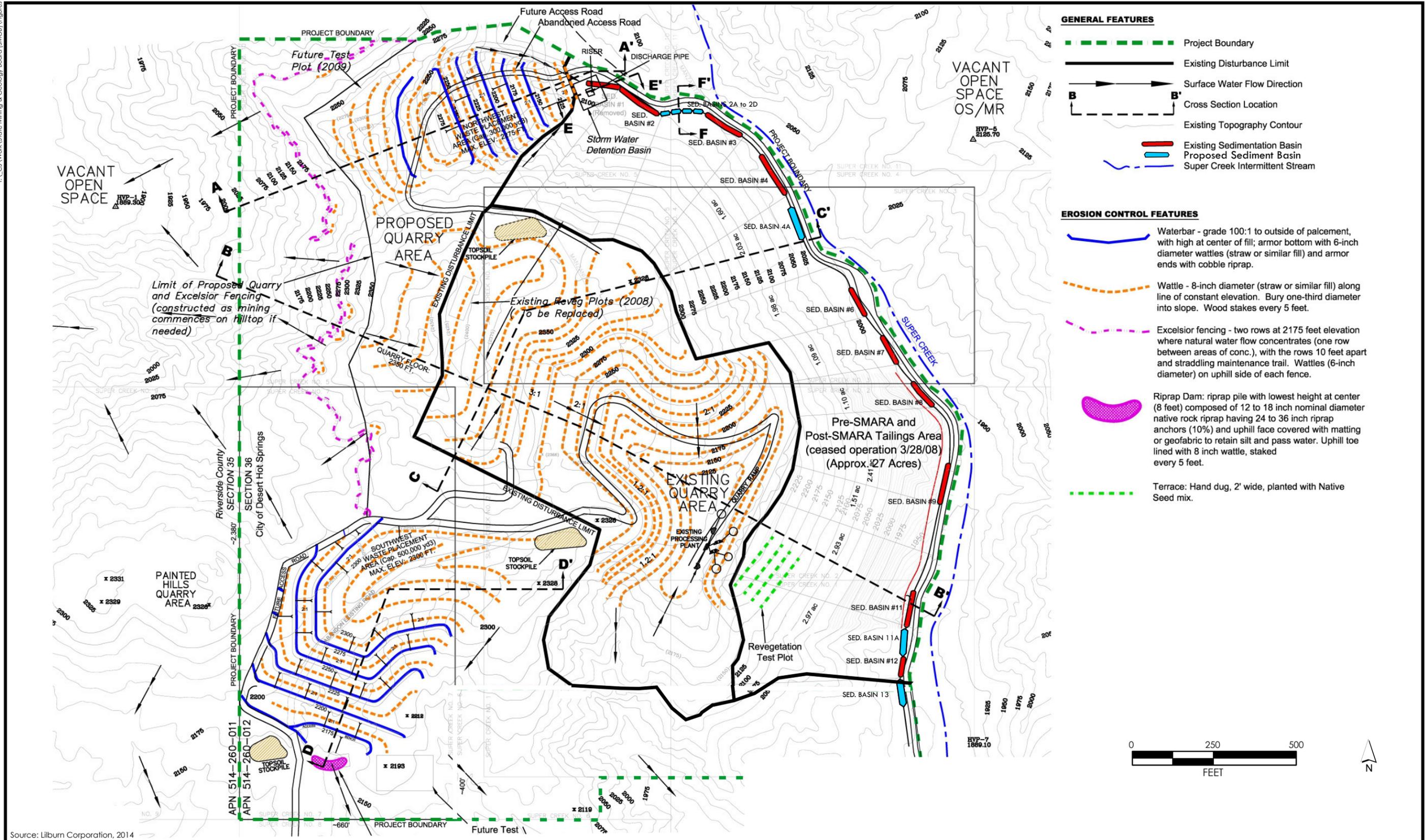
As mining proceeds under the Proposed Action, a central depression would be maintained to allow any on-site water flows to deposit sediments within the confines of the quarry expansion area. This enclosed depression area would be maintained until the quarry is mined to its final depth. Berming along the perimeter of the quarry expansion area would be used to supplement the retention of water flows on-site.

Key elements of the Proposed Action’s erosion and sediment control measures include sedimentation basin improvements and construction, riprap placement, top slope reduction, implementation of erosion control measures, and revegetation. These elements are described below.

Sedimentation Basins

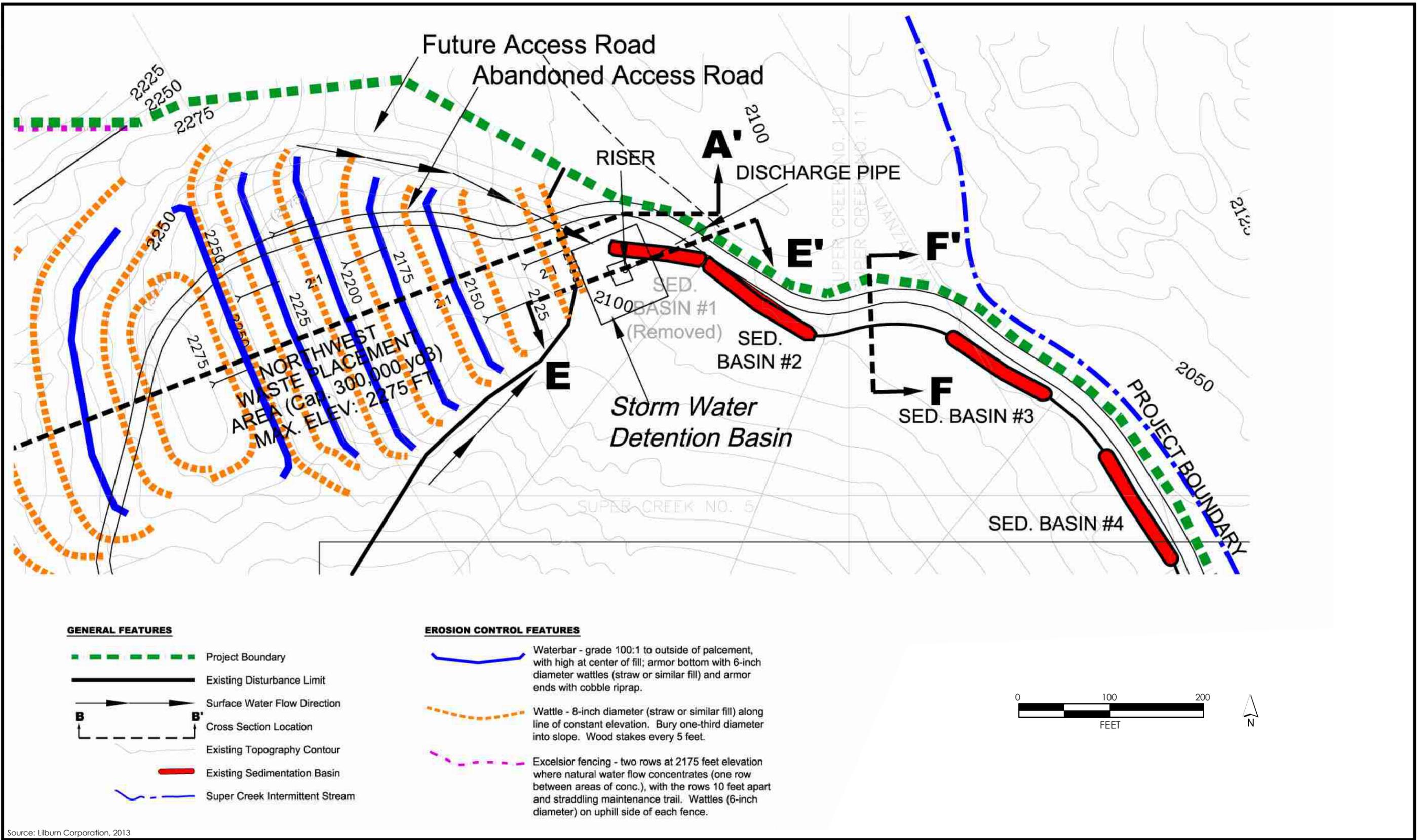
Twelve sedimentation basins were constructed in November 2007 along the base of the East Tailings Slopes and west of the access road that is located west of Super Creek to collect and limit fines erosion and runoff from the quarry site. The access road along Super Creek is bermed adjacent to the creek, and the roadbed is angled inward toward the waste material slope.

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Source: Lilburn Corporation, 2014

Figure 2-4
Project Site



Source: Lilburn Corporation, 2013

Figure 2-5
Northwest Waste Placement Area

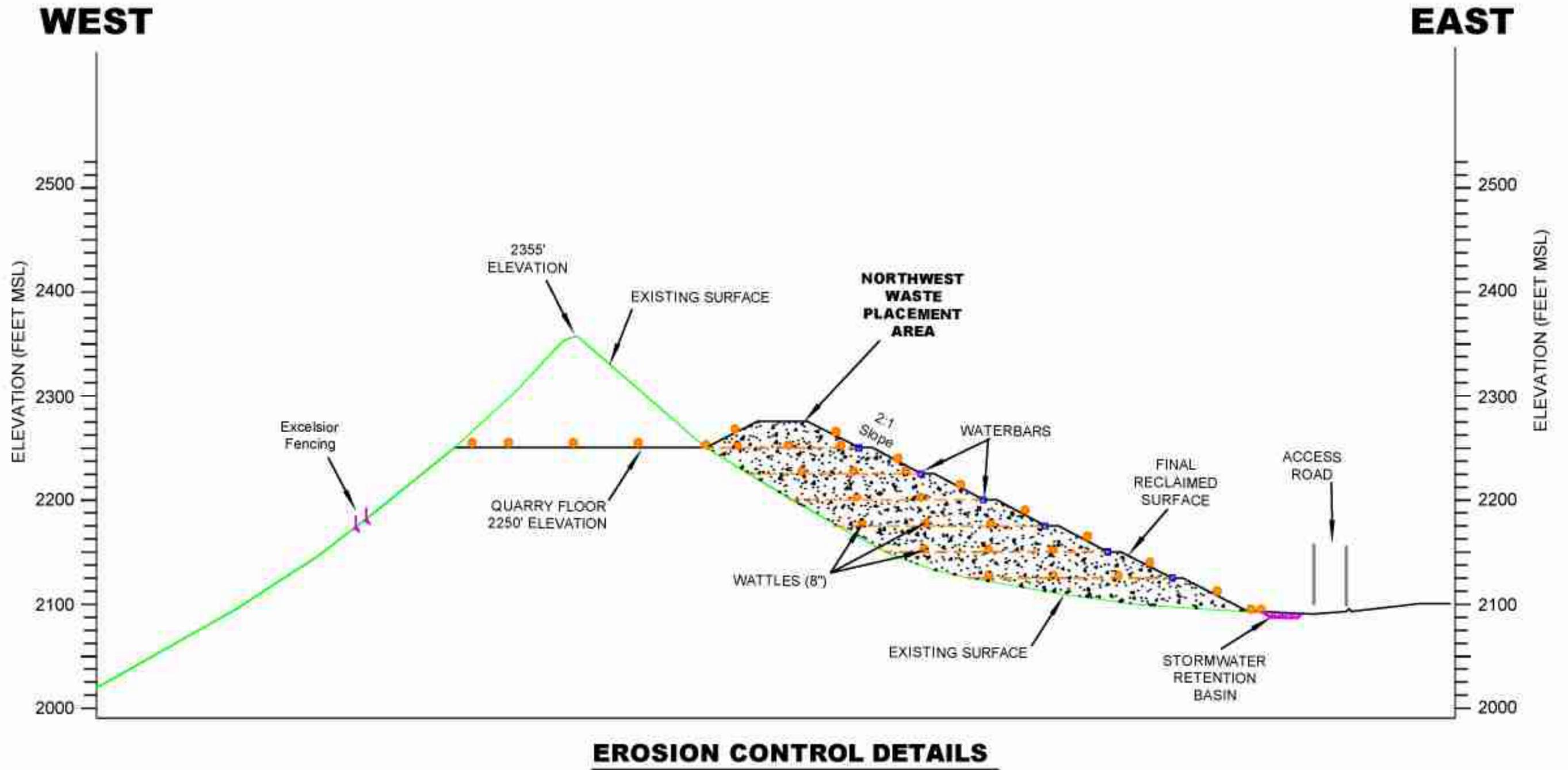
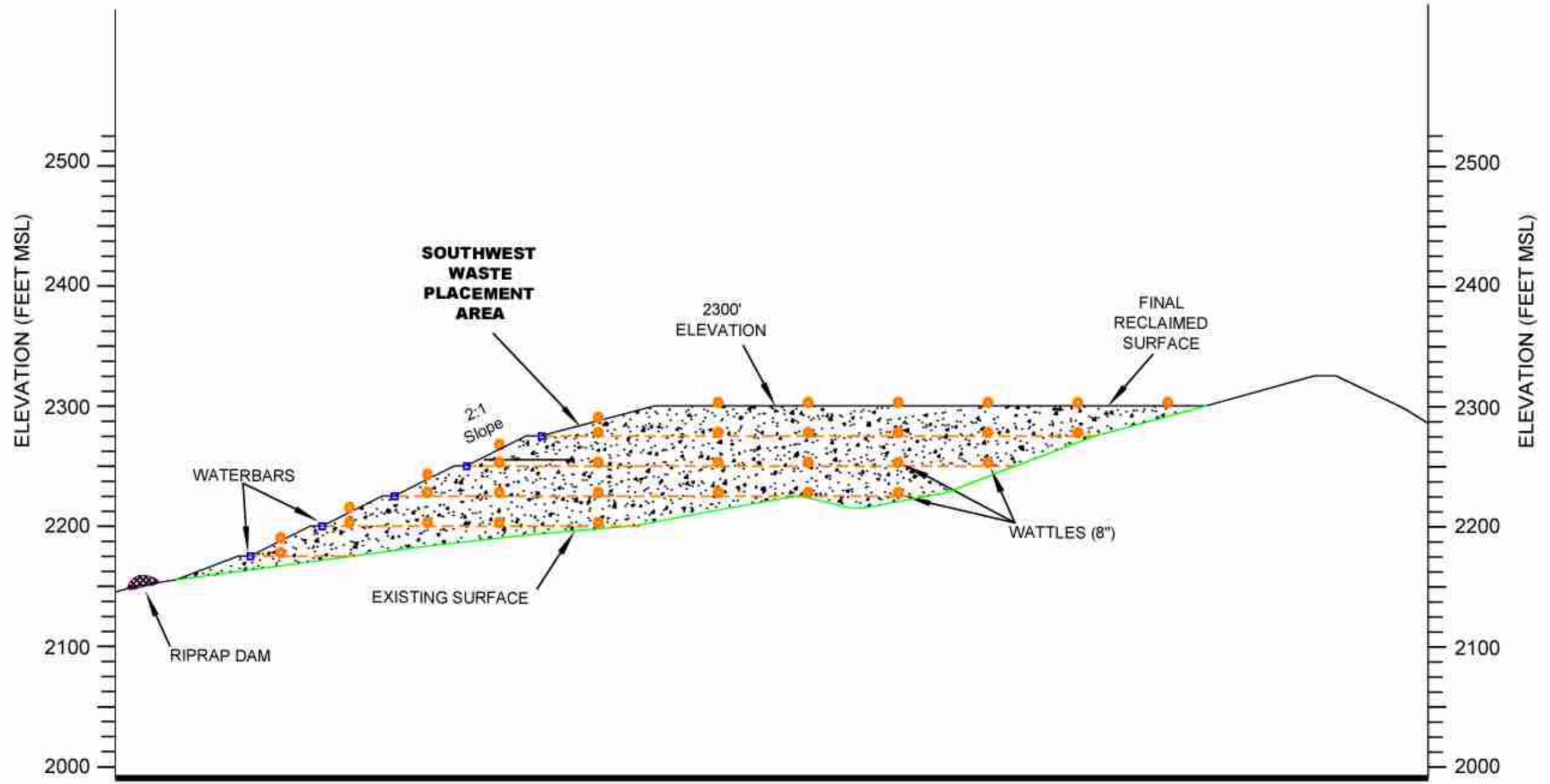


Figure 2-6
Proposed North Quarry - Cross Section

SOUTHWEST

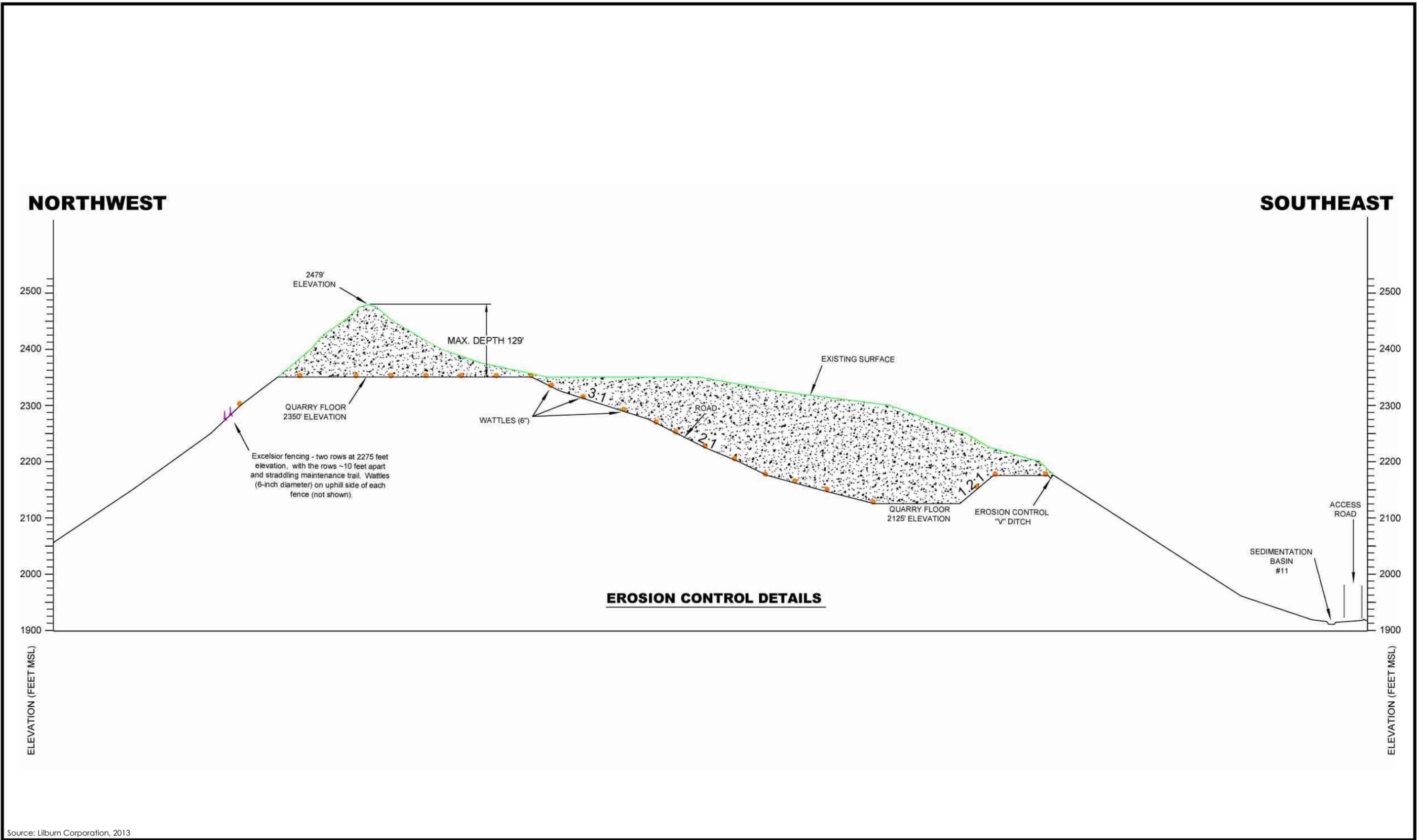
NORTHEAST



EROSION CONTROL DETAILS

Source: Lilburn Corporation, March 2014

Figure 2-7
Proposed Southwest Waste Placement Area - Cross Section



Source: Lilburn Corporation, 2013

Figure 2-8
Detail Existing Quarry

A drainage channel along the inside of the road intercepts runoff from the slopes and conveys flows downstream through a series of narrow detention basins and along the inside edge of the road to a point where the gradient flattens. The conveyance channel joins Super Creek at the road crossing located south of the southeastern project boundary.

The inflow and outflow areas of the basins and the connecting drainages have been armored with rock and riprap to slow flows from runoff from the waste placement areas and to capture sediment. The adjacent road provides easy access for the inspection and removal of accumulated sediment in the basins.

Under the Proposed Action, the capacity of the existing basins would be increased and maintained, and the conveyance channel connecting the basins would be improved. In addition, five new and two extended existing basins would be constructed for additional capacity of approximately 0.66 acre-feet, providing a total capacity of 2.06 acre-feet (see Appendix A: Appendix I-3). A typical cross-section of the proposed sediment basins is shown in Figure 2-9.

Procedures for monitoring and maintaining the sediment basins during the life of the project are included in the Plan of Operations/Amended Reclamation Plan (Appendix A, Section 14d, page 65). Upon termination of operations in approximately 25 years, the slopes would be stabilized with vegetation. At that time, the basins would be filled to approximate original contours and revegetated.

Riprap Placement

Riprap ranging from less than 0.25 ton to 1.0 ton was previously placed along the base of the East Tailings Slopes where an adequate bench is present between the toe of the slope and the access road along Super Creek in accordance with the current reclamation plan. Where closely spaced, the riprap has reduced runoff velocity sufficiently to allow deposition of entrained sediment, which has promoted establishment of grasses and brush. In some locations, the riprap is too widely spaced. Under the Proposed Action, additional riprap would be placed at these locations where an adequate bench is present and access to heavy equipment is available to carry out the placement.

Reducing Top of Slopes

Painted Hills uses an excavator and a crane with a rigged sled to remove excess fines from the top of the slopes to reduce erosion potential. A perimeter berm would be left in place to eliminate any future runoff down the face of the eastern slopes.

Erosion Control

Painted Hills has placed graded rock material or backfilled existing rills and gullies to break up concentrated flows and to reduce velocity within the gullies to decrease the erosion potential. The fill should also create a relatively stable surface to allow a foothold for vegetation establishment.

Revegetation

The approved reclamation plan calls for islands of vegetation to be developed on the slopes to reduce erosion. Painted Hills and its vegetation consultant have cut narrow horizontal benches or

terraces a minimum of 2 to 3 feet wide at 25-foot intervals into the face of the slope. Where existing erosional rills are present, the benches were reinforced with rock riprap of appropriate size to limit further erosion and/or straw wattles. The benches would also be partially covered with rock and then seeded with the seed mix as described in the Plan of Operations/Amended Reclamation Plan. These benches, erosion, and revegetation would be monitored at least once per year and if continued erosion is evident, additional remediation measures would be undertaken. These may include the placing of additional riprap and straw wattles in lines where erosion is observed, construction of additional terraces, and reseeded. Revegetation is described in detail in the Plan of Operations/Amended Reclamation Plan (Appendix A, Section 13: Revegetation, beginning on page 50).

2.1.10 Spill Contingency Plan

As noted in Section 2.1.7, above, Painted Hills maintains an existing Business Plan, a hazardous materials inventory, and a Spill Prevention Control and Countermeasure Plan, which include employee training, record keeping, preventive maintenance, and BMPs.

2.1.11 Project Phasing

The general phasing and time frames of the proposed Super Creek Quarry expansion are described below and are dependent on product demand and quality of rock found over time.

Phase 1 – Ongoing Excavations (Years 2014–2024)

The northwest area would be excavated, with other areas excavated depending on market demand. Material processing and transport to the sales yard would continue. The Northwest Waste Placement Area would be developed. Sloping, erosion control, and revegetation of East Tailings Slopes and upper quarry slopes would be completed.

Phase 2 – Ongoing Excavation and Concurrent Reclamation (Years 2025–2039)

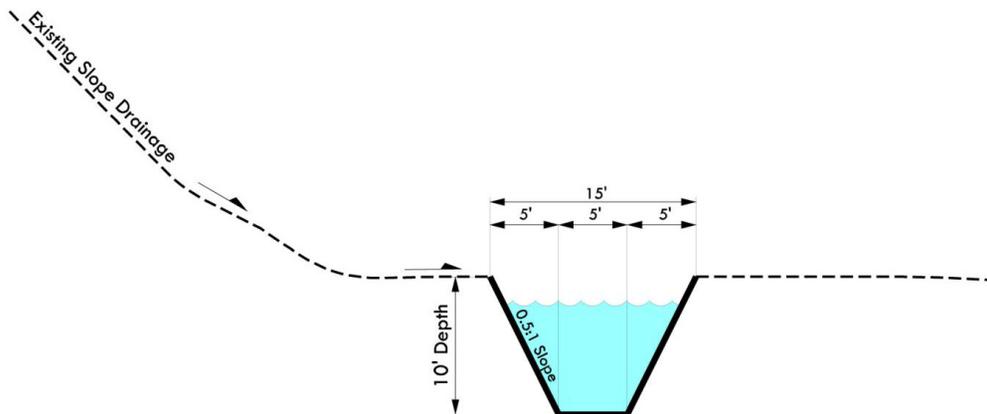
The west-central area and southeastern pit would be excavated depending on market demand. Processing and transferring material to the sales yard would continue. The Southwest Waste Placement Area would be developed. Sloping, erosion control, and revegetation of East Tailings Slopes and upper quarry slopes would be completed.

Phase 3 – Operations Scheduled for Completion (2039–2040)

Mining excavations would cease. All mobile and portable plant equipment would be removed from the site except as needed for reclamation. Final recontouring would be implemented as required to meet approved design. Sedimentation basins at base of slope would be filled and revegetated. Revegetation activities on all quarry areas would continue, including any quarry roads.

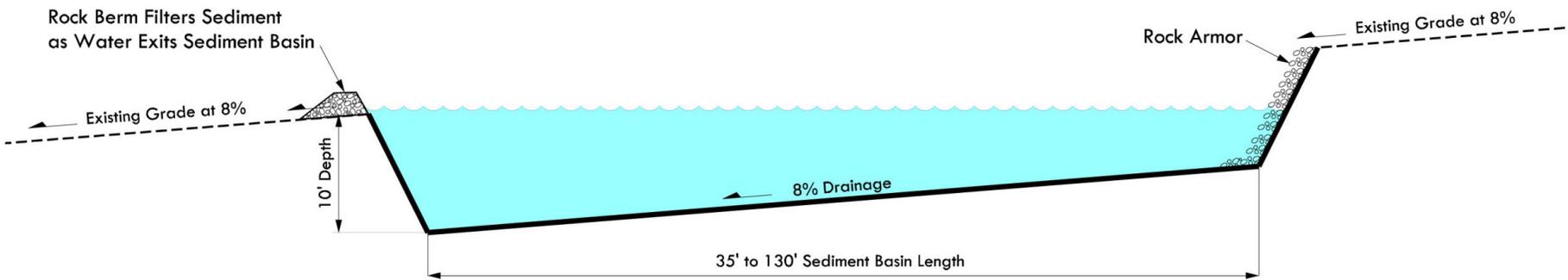
Phases 4, 5, and 6 – Final Reclamation After Operations Cease (Years 2040–2049, or until success criteria are achieved)

All revegetation activities would be finalized and revegetation and substantial erosion remediated as necessary. Site revegetation would be monitored until success criteria are met. Final reclamation of all remaining unreclaimed quarry roads on-site would be completed.



Typical Sediment Basin Cross Section

Super Creek Quarry
Not to Scale



Typical Sediment Basin

Super Creek Quarry

Source: Lilburn Corporation, 2013

Figure 2-9
Typical Sediment Basin

2.1.12 Road Construction and Maintenance

The quarry site is located approximately 2 miles north of the existing building supply retail site located at 58645 Old Highway 60, Whitewater, California (refer to Figure 2-1). Access between the quarry site and the retail site is currently, and would continue to be, a dirt and gravel haul road by an existing 50-foot-wide BLM right-of-way (CA-22568). The road averages 20 to 25 feet wide, and this width is adequate for two trucks to pass each other. There are no specific truck turn-outs. In addition, the haul trucks are able to communicate their location to other trucks and mine vehicles. The road is maintained in a safe and usable condition per right-of-way stipulations including blading, ditching, culvert installation, and surfacing. Swinging gates are located on the western and eastern road segments about 0.5 mile south of the quarry.

2.1.13 Utilities

Electrical power for the quarry site is supplied by on-site generators permitted through the South Coast Air Quality Management District (SCAQMD). No commercial power or infrastructure is available at the quarry site. Sewage generated at the quarry is contained in portable restrooms. These would be serviced by a commercial provider and removed upon closure. No other utility services or infrastructure are currently available to the project site or proposed.

2.1.14 Reclamation Plan

The Proposed Action's plan for site reclamation is described in detail in the *Super Creek Quarry Expansion Revised BLM Plan of Operations and Amended Reclamation Plan No. 137 (CA ID #91-33-0003)*, included as Appendix A of this EA-IS/MND. A detailed description of the proposed amended reclamation plan is contained in Appendix A under the heading "Reclamation" (see Sections 1–15 starting on page 43).

Reclamation procedures under the Proposed Action would include (1) regrading of mined areas as necessary to achieve planned slopes; (2) implementing and maintaining erosion control features; (3) roughening the compacted surface to hold moisture; (4) adding any stockpiled surface material containing banked seeds and available silts; (5) seeding with native seeds; and (6) staking or flagging reclaimed areas to eliminate additional disturbance. Reclamation activities would be accomplished concurrently with the planned excavations. Roads not needed for site and quarry access would be stripped of any road base material, ripped, covered with available growth media, and revegetated.

The amended reclamation plan was prepared in compliance with SMARA. The reclaimed end use would be open space. Figure 2-10 shows areas of the project site subject to reclamation under the Proposed Action's amended reclamation plan.

The amended reclamation plan contains the following elements.

Regrading and Reshaping

All quarry slopes would be reclaimed to produce stable slopes as recommended in the Slope Stability Investigations (see Plan of Operations/Amended Reclamation Plan: Appendices H-1, H-2, and H-3), reducing the possibility of landslides, earth flows, or rock falls. All quarry cut slopes would be final-graded to no steeper than 1.2H:1V with all waste placement area slopes no

steeper than 2H:1V. Grading, as well as the placement of berms at the crest of all project slopes, would be completed in keeping with recommendations in the report entitled “Amended Erosion Control Designs” (see Plan of Operations/Amended Reclamation Plan Appendix I-1) to prevent adverse impacts due to drainage from the toe of the fill slopes.

Wildlife Habitat Rehabilitation

Any restoration of wildlife habitat associated with reclamation of the project site would be accomplished solely through the implementation of the regrading, resoiling, and revegetation activities described in the Proposed Action’s Plan of Operations/Amended Reclamation Plan.

Topsoil Handling

There is no topsoil in the existing active quarry area; however, a thin veneer of topsoil covers portions of the proposed expansion area. Where suitable topsoil material is present, at least the first 12 inches would be cleared, used for concurrent reclamation if areas available, or stored for reclamation prior to expansion into the new excavation area.

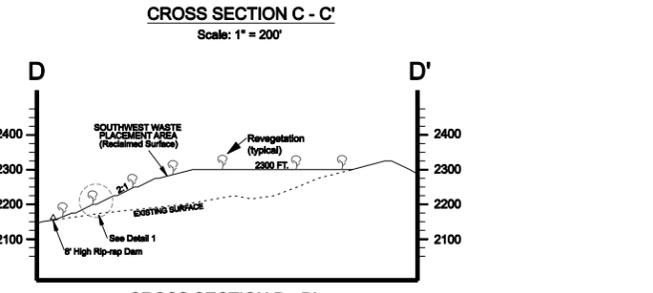
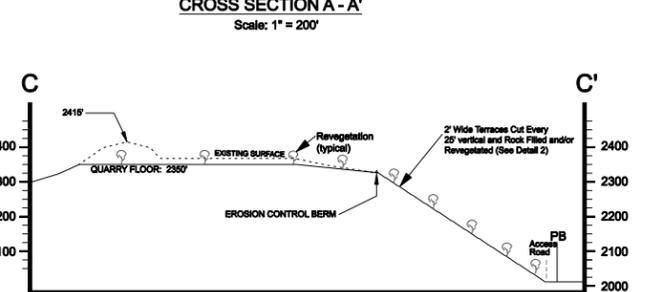
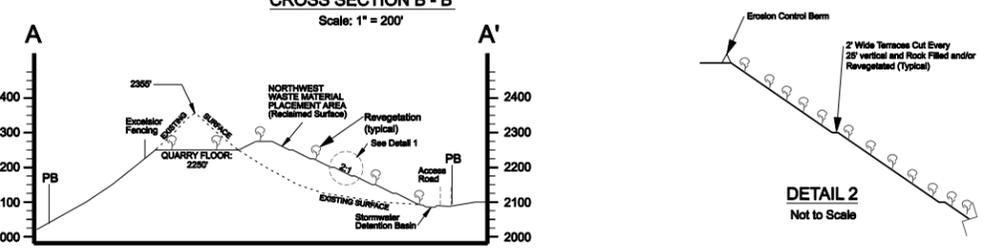
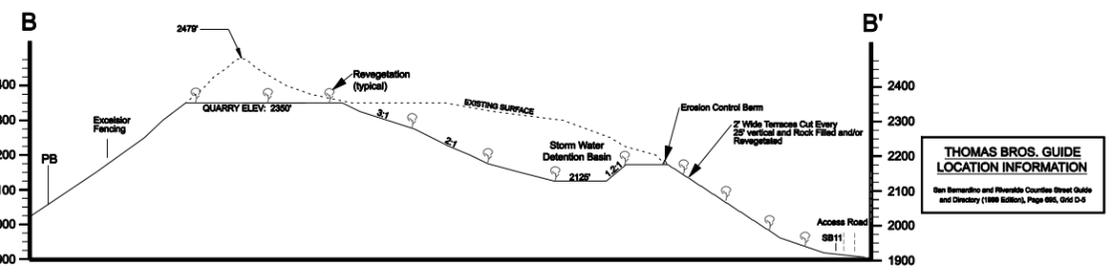
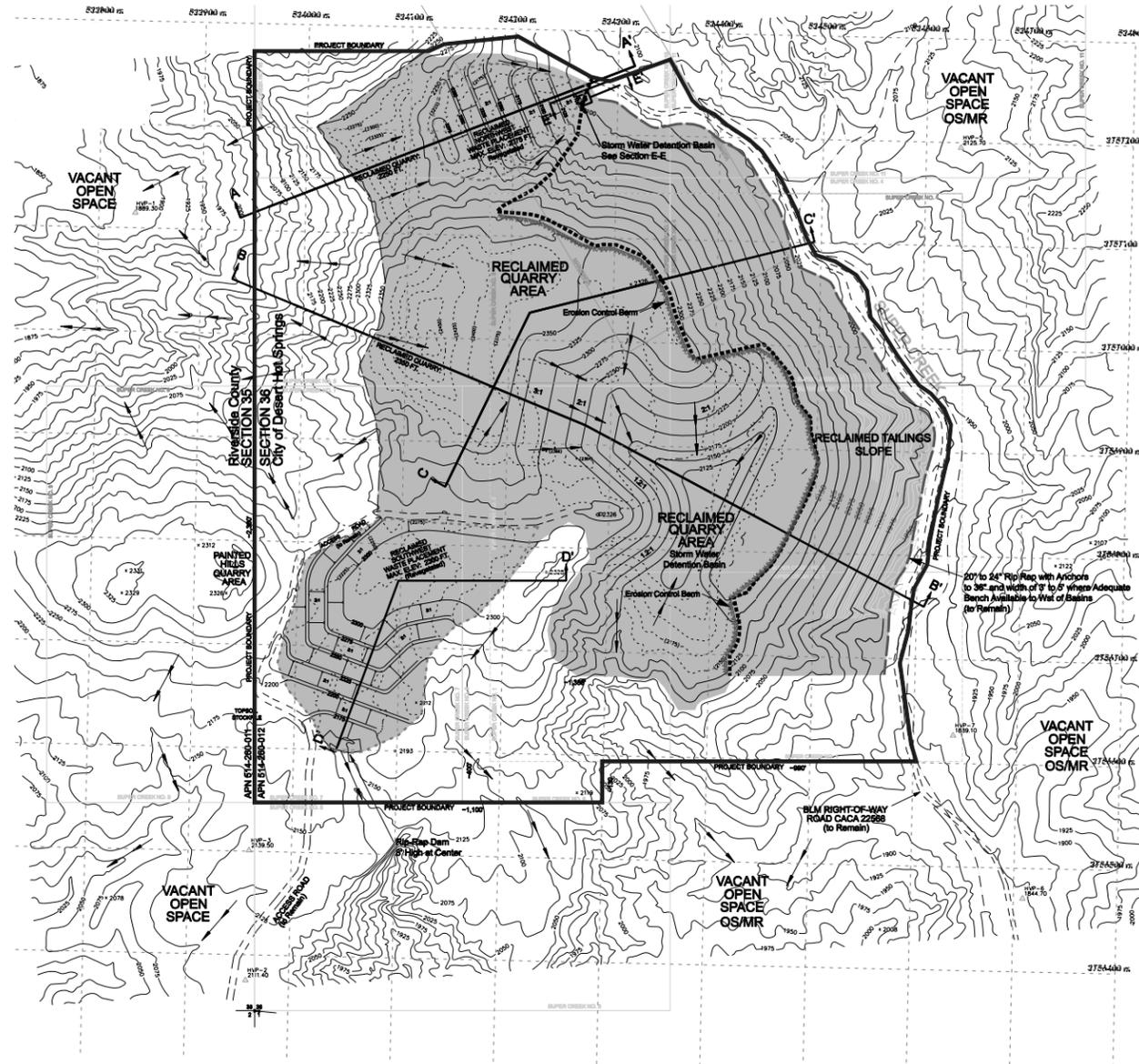
Revegetation

As portions of the project site are mined to a finished grade and would not be disturbed by continuing project activities, revegetation activities would be implemented as described in detail in the Plan of Operations/Amended Reclamation Plan (Appendix A, page 43, under “13. Revegetation”). The areas to be reclaimed would be recontoured to final grades, ripped to a depth of at least 1 foot along the contour, covered in island patterns with available stockpiled topsoil material, and tilled to leave a rough surface. Broadcast seeding methods would be used to cover the prepared surfaces using only seeds and seeding rates that have proven successful in the revegetation test plots. Table 2-2 lists the proposed seed mix.

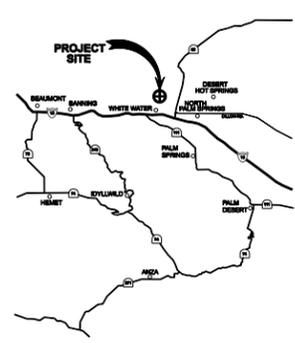
Table 2-2: Revegetation Seed Mix Super Creek Quarry

Common Name	Latin Name	Lbs. of Pure Live Seed per Acre
Creosote bush	<i>Larrea tridentata</i>	10
Burro bush	<i>Ambrosia dumosa</i>	4
California buckwheat	<i>Eriogonum fasciculatum</i>	4
Desert needlegrass	<i>Achnatherum speciosum</i>	4
Joint fir	<i>Ephedra nevadensis</i>	2
Brittlebush	<i>Encelia farinosa</i>	4
Deerweed	<i>Lotus scoparius</i>	2
Total		30

Source: Super Creek Quarry Expansion Revised BLM Plan of Operations and Amended Reclamation Plan No. 137 CA ID #91-33-0003. Updated January 2013. Page 52.

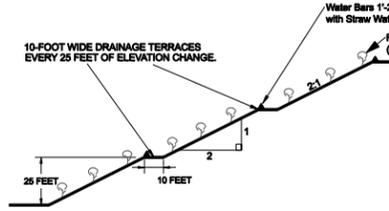


LOCATION MAP

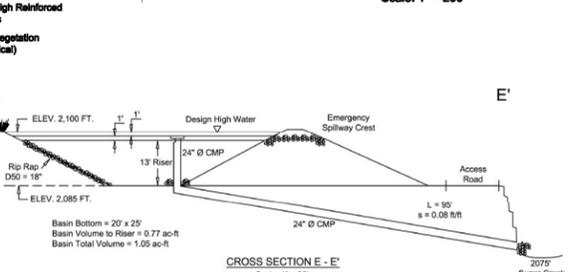


SITE INFORMATION

RECLAIMED QUARRY AREA:	68.2 Acres
Reclaimed Eastern Waste Tailings Slopes:	27 Acres
Undisturbed West Slopes:	12 Acres
Undisturbed South Area:	8 Acres
TOTAL PROJECT AREA:	108.2 Acres
ASSESSOR'S PARCEL NUMBER(s):	514-280-012-0001
LEGAL DESCRIPTION:	The possessory interest and all other rights, title and interest in and to land and improvements thereon described as Super Creek #1 through #7, Super Creek #10 and #11, and the Monzonita claims in Sections 35 and 36, Township 2 South, Range 3 East, SB8M.
UTILITIES	
Telephone - Mobile Service	
Water - Office Well	
Electricity - Diesel Generator	
Gas - None	
Sewer - Portable Toilets	



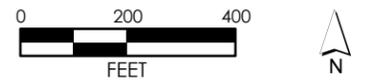
DETAIL 1
TYPICAL WASTE PLACEMENT AREA SLOPE
Scale: N.T.S.



CROSS SECTION E - E'
Scale: 1" = 20'
Northwest Waste Placement Area Storm Water Detention Basin

LEGEND

- PROJECT BOUNDARY
- QUARRY/TAILINGS BOUNDARY
- ~ EXISTING CONTOUR
- DRAINAGE FLOW DIRECTION
- PB PROJECT BOUNDARY
- PROJECT BOUNDARY AREA TO BE RECLAIMED AND REVEGETATED (APPROXIMATELY 63 AC)



Source: Lilburn Corporation, 2013

Figure 2-10
Final Reclamation Plan from the Plan of Operations

Seeding would take place between November and January to take advantage of winter precipitation and to eliminate the need for irrigation. Reclaimed areas would be clearly staked and flagged to eliminate additional disturbance from ongoing operations. Annual monitoring and remediation as needed would be performed and would continue until the success criteria are achieved as discussed in greater detail in Section 2.1.15 “Monitoring and Reporting Plans,” below.

Removal or Stabilization of Structures

All cleanup operations would be conducted within one year of the termination of mining estimated for 2039. Project equipment not required for final reclamation activities would be removed from the site. Scrap material, refuse, unwanted equipment, and surplus materials would be removed and disposed of at an appropriate landfill site. Process plant facilities and equipment would be removed from the site. This would include dozers, loaders, crushing and screening plant, conveyors, etc.

Refuse in any form would not remain on the project site and would be appropriately disposed of in a permitted landfill. Excess material piles and disturbed areas would be regraded for positive drainage, scarified, and revegetated. The BLM right-of-way access under CA-22568 would be left in place unless otherwise directed by the BLM.

Post-Closure Management

Mine reclamation/revegetation would be monitored following final reclamation and revegetation annually until success criteria are met, as described below. Remediation of revegetated areas such as weeding and reseeding with different seed mixes would be conducted as necessary. This would result in formal closure and release of reclamation bonds.

2.1.15 Monitoring and Reporting Plans

Under the Proposed Action, periodic reviews of project operations and reclamation monitoring would be conducted in compliance with local, state, and federal laws and regulations authorizing operation. These procedures are described in detail in the Plan of Operations/Amended Reclamation Plan (see Section 14 of the Amended Reclamation Plan under “Monitoring and Maintenance,” page 54) and would consist of the following:

1. **Reclamation:** Painted Hills would implement a maintenance program to ensure the success of the reclamation program. Throughout the life of the project, Painted Hills would continue to submit annual Mining Operation Reports to the California Department of Conservation Office of Mine Reclamation (OMR), the SMGB, and the BLM, as required by amendments to SMARA. In addition, annual monitoring reports would assess existing conditions on-site including revegetation efforts, slope stability, slope erosion, drainage controls, and safety measures and would provide recommendations to improve and/or remediate any deficiencies in these areas.
2. **Revegetation:** Revegetation activities would be monitored annually during operations and following cessation of mining activities, until the established success criteria are met beginning one year after initial seeding or planting at any one site. All data would be recorded on a standard form, and copies would be submitted as an appendix to each Annual Report.

-
3. **Air Quality:** The site's processing and power equipment are, and would be, operated under a permit from the SCAQMD with operations and permits inspected and renewed annually.
 4. **Surface Water Protection:** Painted Hills would implement proposed inspection and maintenance procedures as well as the proposed erosion and sedimentation controls, which are incorporated into the its updated SWPPP and listed in Section 14(d) of the Plan of Operations/Amended Reclamation Plan (Appendix A). Monitoring of slopes, erosion control, revegetation, and safety measures would also be accomplished by BLM and SMGB staff as part of their annual SMARA inspection and reporting.
 5. **Slope Stability:** Slope stability monitoring would be conducted annually as described in Sections 14(e) and 14(f) of the Plan of Operations/Amended Reclamation Plan (Appendix A).
 6. **Hazardous Materials:** Painted Hills would maintain its existing Business Plan, hazardous materials inventory, and a SPCC, which include employee training, record keeping, preventive maintenance, and BMPs.
 7. **Financial Assurance:** Prior to commencement of the Proposed Action expansion activities, an updated financial assurance cost estimate (FACE) mechanism would be approved by the BLM and the SMGB to guarantee proper and thorough reclamation of any additional disturbance on the project site. This assurance would be reviewed and adjusted as needed on an annual basis.

2.1.16 Environmental Protection Measures

Painted Hills would commit to the following environmental protection measures (mitigation measures) as part of the Proposed Action to prevent unnecessary or undue degradation during construction, operation, and reclamation of the proposed Super Creek Quarry expansion.

Cultural Resources

No adverse effects are anticipated to known cultural resources as a result of the Proposed Action. However, a program to implement and monitor the following measures is required to mitigate potential impacts on unknown resources of Native American concern or if previously unknown resources are discovered during ground disturbance.

MM-CR-1 Consultation Prior to Ground Disturbance in New Areas. Prior to ground disturbance in the quarry expansion areas or placement of tailings in new permanent waste placement areas authorized by this project, the BLM shall complete consultation with local Native American representatives, including any site visits, if requested, and Section 106 consultation, as appropriate.

MM-CR-2 Native American Monitoring During Ground Disturbance. The results of the cultural resources studies indicate that the project is located in an area of high sensitivity for Native American resources. For this reason, a Native American monitor shall be present during initial ground-disturbing activities to ensure that resources will not be directly or indirectly

impacted in any new areas of excavation. Monitoring may be reduced or potentially eliminated if the Native American monitor determines that the potential for impacts has been eliminated.

MM-CR-3 Accidental Discovery of Human Remains. There is always the possibility that ground-disturbing activities during construction may uncover previously unknown buried human remains. If human remains are discovered during any phase of construction, including disarticulated or cremated remains, federal laws and standards apply including the Native American Graves Protection and Repatriation Act (NAGPRA) and its regulations found at 43 CFR 10.

In the event of accidental discovery or recognition of any human remains, all ground-disturbing activities should cease within 100 feet of the remains. California State Health and Safety Code Section 7050.5 dictates that no further disturbance shall occur until the county coroner has made the necessary findings as to origin and disposition. If the remains are determined by the county coroner to be Native American and not subject to their authority, and said remains are found on BLM lands, then the BLM shall be notified within 24 hours. If the remains are found to be Native American as defined by NAGPRA (Public Law 101-601), the BLM shall take the lead in the treatment of said remains and any associated objects by implementing the appropriate agency procedures for NAGPRA compliance.

MM-CR-4 Accidental Discovery of Cultural Resources. It is always possible that ground-disturbing activities may uncover presently obscured or buried and previously unknown cultural resources. In the event that buried cultural resources are discovered during construction, such resources could be damaged or destroyed, resulting in adverse effects to cultural resources. If subsurface cultural resources are encountered during construction, if evidence of an archaeological site or if other suspected historic resources are encountered, it is recommended that all ground-disturbing activity cease within 100 feet of the resource. A professional archaeologist or BLM Cultural Resources Specialist shall be consulted to assess the find and to determine whether the resource requires further study. This assessment process may require consultation with the State Historic Preservation Officer (SHPO), tribal groups, and other interested parties. The qualified archeological personnel shall assist the lead agency by generating measures to protect the discovered resources, which may include input from interested parties. Any previously undiscovered resources found during project implementation should be recorded on appropriate DPR forms and evaluated for significance under all applicable regulatory criteria.

In addition, reasonable efforts to avoid, minimize, or mitigate adverse effects on the resources will be determined by the BLM. Such efforts will be communicated by the BLM to the SHPO, Native American tribes with concerns about the property, and the Advisory Council on Historic Preservation (ACHP) within 48 hours in compliance with 36 CFR 800.13(b)(3).

Wildlife and Vegetation

MM-BIO-1 Desert Tortoise: The following actions shall be implemented prior to and during expansion activities:

- i. An authorized biologist shall conduct a preconstruction desert tortoise clearance survey on undisturbed areas no more than 14 days prior to commencement of project activities

within desert tortoise habitat. Any desert tortoise burrows within 50 yards of the proposed expansion area should be flagged for avoidance. If a desert tortoise is observed within 50 yards of the proposed expansion area, the BLM shall be contacted to determine whether additional protection measures are required.

- ii. If burrows are found in the project area and avoidance zones marked with flags, all work activities shall be restricted to the limits of the flagged area.
- iii. An authorized biologist shall conduct a desert tortoise educational program for personnel at the project site; the program should discuss measures to protect desert tortoise on-site.
- iv. Workers shall be required to check for desert tortoise under all heavy equipment and vehicles prior to moving them.
- v. No firearms, dogs, or other pets shall be allowed in desert tortoise habitat within the project area.
- vi. All trash and food items shall be promptly contained within closed, common raven-proofed containers and will be removed daily from the project site to reduce the attractiveness of the area to common ravens (*Corvus corax*).
- vii. An on-call authorized desert tortoise biologist shall be employed to assist the site manager should any tortoise issues arise when previously undisturbed lands are cleared for project purposes.

MM-BIO-2 Burrowing Owl: Mitigation measures and survey protocols outlined in the CDFW (2012) Staff Report on Burrowing Owl Mitigation shall be implemented by a qualified biologist. Mitigation methods can include actions to avoid take of owls or owl nests; perform preconstruction surveys; conduct site surveillance; minimize disturbance; establish restriction or avoidance buffers around occupied burrows; exclude and close abandoned burrows; translocate individuals; provide permanently protected replacement habitat; install artificial burrows; and design a mitigation monitoring and reporting plan. Ultimately, mitigation for this species should be roughly proportional to the level of impact. For the Proposed Action, the authorized biologist shall conduct preconstruction surveys following CDFW protocols and establish avoidance areas for any active burrows found within and adjacent to the project area. If burrowing owls are documented on-site, the biologist shall consult with the BLM regarding possible additional restrictions that would be necessary for project implementation.

MM-BIO-3 Raptors and Migratory Birds: A survey for active nests shall be conducted prior to the onset of project activities on any lands not previously disturbed or left undisturbed for six months. If project activities are planned to begin during the nesting season for local avian species (typically March 15 to September 15), a qualified biologist shall conduct a focused survey for active nests of raptors and migratory birds, with special attention given to areas likely to support Le Conte's thrasher, within and in the vicinity (no less than 100 feet outside project boundaries, where possible) of disturbance areas no more than three days prior to the onset of activity. If an active nest is located during a survey, the USFWS and/or CDFW (depending on the regulatory status of the species) shall be notified regarding the status of the nest. Furthermore, project activities shall be restricted as necessary to avoid disturbance of the nest until it is abandoned or resource agencies deem the potential for abandonment (or loss of individuals) to be minimal.

Restrictions may include establishment of exclusion zones (no ingress of personnel or equipment at a minimum radius, typically 100 feet or greater around the nest) or alteration of the project schedule. If no active nests are found during the survey, project activities may proceed without further restrictions (related to birds). No action is necessary if project activity will commence outside the breeding season (generally September 16 through March 14).

MM-BIO-4 Pre-Ground Disturbance Special-Status Plant Surveys for New Areas: A qualified botanist shall conduct a focused survey for special-status plant species in the quarry expansion and new waste placement areas no more than 30 days prior to the onset of mining and/or reclamation activities within any previously undisturbed lands. Surveys shall also be conducted on any lands left undisturbed for six months prior to any re-disturbance or further mining and/or reclamation activities. If sensitive plants (other than triple-ribbed milk-vetch) are located during preconstruction surveys, the USFWS and/or California Department of Fish and Wildlife (CDFW) (based on the species regulatory status) shall be notified regarding appropriate avoidance or disturbance minimization measures and allowed to transplant the species, if appropriate. Project activities shall be restricted based on USFWS and/or CDFW guidance. Restrictions may include either establishment of avoidance buffer zones, installation of silt fences, and/or alteration of the construction schedule.

If triple-ribbed milk-vetch is found on the site during any survey, the BLM and USFWS shall coordinate on the appropriate actions to be taken, based on the number of plants and other circumstances involved. Formal consultation may be required unless plant disturbance can be avoided by reconfiguring mining and reclamation activities on the site.

MM-BIO-5 Jurisdictional Waters of the U.S. The jurisdictional delineation for the project conducted on May 30–31, 2013, by the Lilburn Corporation shall be submitted to the U.S. Army Corps of Engineers (USACE) for official verification. Based on the amount of jurisdictional waters to be impacted by project implementation, mitigation shall be employed to achieve no net loss of waters and the appropriate permits (e.g., USACE permit, RWQCB Water Quality Certification, and CDFW Lake or Streambed Alteration Agreement) shall be obtained prior to any on-site project disturbance of jurisdictional waters.

All permit conditions, best management practices, and other measures (established by the permitting authorities) shall be employed to minimize and compensate for potential impact to jurisdictional waters. Any required mitigation plans shall be completed and approved by the regulatory agencies prior to the onset of activities authorized by this project. Mitigation shall also be noted on design plans, as appropriate. At minimum, measures shall include restoration or enhancement of an area of equivalent size to the disturbance area within the same watershed that shall be protected in perpetuity from anthropogenic disturbance; implementation of a stormwater pollution prevention plan for the duration of mining activities to ensure the project does not affect the water quality of nearby drainages; and include a description, timetable for completion, and maintenance schedule of planned sedimentation and erosion control improvements in the applicable permits applications so these actions are completed with regulatory oversight to their satisfaction.

Visual Resources

MM-AES-1 Visual Resources: At the completion of mining operations, the tops of decorative rock extraction area slopes shall be rounded to decrease the contrasting edges of the disturbance.

Wildlife

2.2 No Action Alternative

Under the **No Action Alternative**, the Proposed Action described in Section 2.1 above would not be implemented. Painted Hills would not acquire approval to expand its existing Super Creek Quarry and would not amend its current reclamation plan. As such, Painted Hills would continue to mine the existing quarry under its approved BLM Plan of Operations and Reclamation Plan No. 137. Currently, Painted Hills operates under an approved BLM Plan of Operations (CA-39566) and a County of Riverside-approved Reclamation Plan No. 137 (February 1995). Mining and processing operations are located on approximately 23.8 acres of the Super Creek Quarry site. Inactive waste material slopes cover approximately 27 acres on the south and east sides of the quarry site.

According to the project applicant's planning consultant,³ the storage of waste material on-site is currently the major obstacle to the continuing operations. Because the prior practice of using the east slopes for waste material storage was terminated in 2008, waste material is being temporarily stored on-site within the quarry area and covers areas of potential ore reserves. Under the No Action Alternative, Painted Hills would continue to operate under the approved Plan of Operations CA-39566 and would attempt to continue to produce excavated rock at a rate of 50,000 tons per year, of which 25,000 tons would be saleable product and 25,000 tons would be waste.

Under the No Action Alternative, mining and waste material storage would have to occur within the current 23.8-acre quarry area. Without the approval of the Proposed Action, additional waste placement storage stockpiles would not be made available, and mining operations would become unworkable within 6 to 12 months due to the amount of waste material and the lack of adequate waste material storage space. At the end of this period, Painted Hills would terminate mining and implement the final reclamation of the site per the current Reclamation Plan No. 137. It is unlikely, however, that the SMGB would allow implementation of Reclamation Plan No. 137 without modification.

If the proposed expansion is denied, the SMGB would still require an amendment to the existing Reclamation Plan to (1) include the areas where activities have extended beyond the reclamation boundary (small areas along the toe of the tailings slope adjacent to Super Creek where erosion and road repair have occurred); (2) include the series of sediment catchment basins along the toe of the tailings slopes near Super Creek, and incorporate the currently proposed design, planned monitoring and maintenance of these basins; (3) incorporate revisions to the revegetation plan applicable to test plotting and establishment of vegetation on the existing tailings slopes; and (4) incorporate pertinent slope stability evaluations for the tailings slopes to show that they are

³ Marty Derus, Lilburn Corporation. Personal communication with R. Hanson, Atkins. Date 8/7/13. Email, Subject title: RE: Super Creek Quarry No Action Alternative.

stable as is and will be monitored on a regular basis until currently approved mining is complete.⁴ The SMGB would also require updated topographic maps to show how the final contours would look compared with current conditions (e.g., how the tailings recently placed above and west/southwest of the processing area would be left).⁵

2.3 Alternatives Considered but Eliminated from Detailed Study

In preparing the proposed Plan of Operations/Amended Reclamation Plan (described above in Section 2.1), Painted Hills evaluated various alternatives to extend mining operations at the Super Creek Quarry site and to implement site reclamation to meet current SMARA standards.⁶ The following is a description of those alternatives considered by Painted Hills, but eliminated as impracticable. The alternatives considered were deemed economically infeasible and/or would create greater environmental impacts than the Proposed Action.

The East Tailings Slopes were used to deposit waste material per the approved 1995 Supplemental Reclamation Plan and its approved slope designs. Subsequent review of the slopes (see CHJ 2012 & 2013; Appendices H-1 and H-2 in the Plan of Operations/Amended Reclamation Plan, Appendix A of this EA-IS/MND) found that the static and seismic slope stability calculations utilizing the strengths obtained during the 2012 large-scale remolded shear testing yield stable slopes for the purposes of reclamation under SMARA. No additional measures with respect to deep-seated slope stability are necessary for reclamation of the existing East Tailings Slopes.

Updated erosion control and reclamation measures for the East Tailings Slopes, as well as for the proposed waste placement areas to reduce runoff and sedimentation erosion, are included in the revised Plan of Operations/Amended Reclamation Plan and summarized in Section 2.1.9, above.

The alternatives considered included the following with a summary of reasons each alternative was deemed infeasible and/or could produce greater environmental impacts than the Proposed Action. These alternatives were previously presented to SMGB staff in 2010.

Use Tailings in Ready Mix Plant to Be Constructed On-Site

This alternative would require Painted Hills to construct an on-site ready mix plant to process the tailings. The tailings consist of silt and sand with all materials 3/8" minus. These materials would require washing and screening for use as Portland cement concrete (ready mix) or mortar sand. This would result in wastage of up to approximately 50 percent. Due to the high wastage, required additional permitting for land use, additional truck traffic from cement delivery, other required raw materials and concrete mixer trucks, dust generation from trucks on the dirt road, and safety issues with said road, this potential alternative would create greater environmental impacts than the Proposed Action.

⁴ Will Arcand, State Mining and Geology Board, Personal communication with R. Hanson, Atkins. Dated 8/5/13. Subject title: "RE: Super Creek No Action Alternative Description."

⁵ Ibid.

⁶ Marty Derus, Lilburn Corporation. Personal communication with R. Hanson, Atkins. Date 8/7/13. Email, Subject title: RE: Super Creek Quarry No Action Alternative.

Disposal of Tailings Off-Site

This alternative could reduce on-site tailings storage by transporting tailings to an off-site disposal area at a cost to Painted Hills. The assessment assumed that the material could be transported to a known aggregate operation located in Cabazon, approximately 14 miles one way. Due to the additional costs of loading and transporting material to an off-site disposal area, additional truck traffic, and dust generation, this potential alternative of disposal off-site is considered economically infeasible and would create greater environmental impact than the Proposed Action.

Sale of Tailings Off-Site

This alternative could reduce the need for on-site tailings storage by selling tailings material to an off-site user, who would purchase the material at the site and haul it away, thus offsetting the transportation costs. There is, however, no apparent market or buyer for the tailings at this time because the material is not suitable for concrete, concrete block, or road base. Thus, while the sale of tailings off-site could be considered again in the future, and some small quantity of tailings may be sold off-site, this alternative does not provide a currently viable approach to the reduction of on-site tailings. In addition, due to additional truck traffic and dust generation from the dirt access road, this potential alternative to sell tailings to an off-site user would result in greater environmental impact than the Proposed Action.

Transfer of Tailings to Metropolitan Water District to Backfill Existing In-Stream Pit

This alternative could reduce on-site tailings storage by selling and transporting tailings to an off-site disposal area, thus offsetting the transportation costs. The assessment assumed that the material could be purchased by the Metropolitan Water District (MWD) to backfill a portion of a closed pit within the Whitewater River, approximately 4.4 miles from the Super Creek Quarry. It is unknown if the MWD is interested in purchasing tailings for fill or if the MWD could purchase fill elsewhere. Due to additional truck traffic and dust generation, this potential alternative of sale and disposal off-site would create greater environmental impacts than the Proposed Action. However, if the MWD must import fill from distances greater than the Super Creek Quarry, this alternative could become environmentally beneficial.

Relocation of Quarry and Processing Facilities

In addition to the alternatives considered but eliminated by the project applicant described above, another alternative to the Proposed Action was considered for this EA-IS/MND. This alternative would require the relocation of quarrying, processing, and reclamation activities to meet Painted Hills' objective of continued supply of decorative rock product. This alternative was considered but rejected from further analysis in this EA/IS for the following reasons.

In the event that an alternative source of "Palm Springs Gold" was found at a location other than the current quarry site, it is likely that development of this source would require the establishment of quarrying and processing operations in an area previously undeveloped for these activities. Developing these activities in previously undeveloped areas inherently presents the potential for greater environmental impact compared to the impact of continuing mining and processing activities on a site that has historically supported these activities. In addition, the relatively close proximity of the Super Creek Quarry to the Whitewater retail facility makes it

more likely that any alternative location would be farther away from the retail facility, requiring greater distances for the transport of material to the retail site. This would result in greater emissions of air pollutants, including greenhouse gases, compared to the Proposed Action. The alternative could also require the introduction of new truck traffic along routes not previously exposed to vehicle trips generated by mining operations, thus resulting in potentially significant impacts on traffic safety, noise, and congestion.

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3 AFFECTED ENVIRONMENT

3.1 Introduction

The purpose of this section of the EA-IS/MND is to describe the existing environment of the project area affected by the Proposed Action. “Supplemental Authorities” is a term used in this EA-IS/MND to refer to environmental issue areas such as air quality and cultural resources that are subject to requirements specified by statute or Executive Order (EO) and must be considered in all BLM environmental documents. The 14 elements associated with the supplemental authorities listed in the NEPA Handbook are listed in Table 3-1.⁷ The table lists the elements and their status in the project area as well as the rationale to determine whether the element is present in the project area, and if the element would be affected by the Proposed Action. Environmental resources contained in the Supplemental Authorities that could be adversely affected by the Proposed Action are evaluated in Section 4 of this EA-IS/MND.

Floodplains

The project site is not located in a recognized floodway, 100-year floodplain, or subject to flash flooding.⁸

Noxious Weeds, Invasive and Nonnative Species

The BLM defines a noxious weed as “a plant that interferes with management objectives for a given area of land at a given point in time.” Through a Memorandum of Understanding between federal and state agencies,⁹ the Palm Springs-South Coast Field Office recognizes the current noxious weed list designated by the California Department of Food and Agriculture.¹⁰

An invasive species is defined as a nonnative or alien plant or animal that has entered into an ecosystem. Invasive species are likely to cause economic harm or harm to human health (EO 13112). Noxious weeds, invasive and nonnative species are highly competitive, aggressive, and easily spread. In addition, the BLM follows all Federal Noxious and Invasive Weed Laws, EO 11312 (Prevention and Control of Invasive Species), and various BLM manuals. A vegetation survey was conducted on April 4, 2010. There were no noxious weeds, invasive, or nonnative species identified in the project area during the survey. In addition, the revegetation plan contained in the reclamation plan portion of the Proposed Action would introduce no noxious weeds, invasive, or nonnative species. This element, therefore, is not analyzed in this EA-IS/MND.

⁷ BLM NEPA Handbook H-1790-1. January 30, 2008. Appendix 1.

⁸ Lilburn Corporation, Super Creek Quarry Expansion Revised BLM Plan of Operations and Amended Reclamation Plan No. 137 CA ID #91-33-0003, prepared for Painted Hills Mining Company, January 2013, p.20.

⁹ U.S. Department of the Interior, Bureau of Land Management (California), Noxious Weeds Memorandum of Understanding, pursuant to the California Food and Agriculture Code, Section 403, and 43 CCR 4500. http://www.blm.gov/ca/st/en/prog/weeds/weeds_mou.print.html.

¹⁰ California Code of Regulations, Title 3, Section 4500 (Noxious Weed Species).

Environmental Justice

Executive Order 12898, issued in 1994, requires that “...each Federal agency shall make achieving Environmental Justice part of its mission by identifying and addressing, as appropriate, is proportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.” The Proposed Action would expand an existing quarry operation in a remote location in Riverside County. No changes to current rock processing or transport operations are proposed. No residential populations are located on or near the quarry site. While distant views of the project site are possible from surrounding communities, the Proposed Action would have limited impact on those views and would have no proportionately high adverse effect on minority or low-income populations. Therefore, this element is not analyzed further in this EA-IS/MND.

Table 3-1: Elements Associated with Supplemental Authorities and Rationale for Detailed Analysis for the Proposed Action

Supplemental Authority Element	Not Present/ Not Affected	Present/ Not Affected	Present/ Potentially Affected	Rationale/Reference Section
Air Quality and Atmospheric Values			X	See Section 3.1.1.
Areas of Critical Environmental Concern (ACEC)			X	The Proposed Action is within the Whitewater Canyon ACEC but would not conflict with ACEC’s management plan. See Sections 3.1.5, 3.1.7, and 3.1.10.
Cultural Resources			X	See Section 3.1.2.
Environmental Justice	X			The rationale for this determination is explained below.
Farm Lands (Prime or Unique)	X			This element is not present on or near the expanded quarry site ¹¹ and is not further analyzed in this EA-IS/MND.
Fish Habitat	X			The rationale for this determination is explained below.
Floodplains	X			See Section 3.1.3.
Forest and Rangelands (Healthy Forest Restoration Act [HFRA]) Projects Only	X			This Proposed Action does not meet the requirements to qualify as an HFRA project.
Health and Safety (Herbicide projects)	X			The Proposed Action does not propose the use of herbicides; therefore, EO 13045 does not apply.
Migratory Birds			X	See Section 3.1.10.
Native American Religious Concerns			X	See Section 3.1.2.
Noxious Weeds, Invasive and Nonnative Species	X			The rationale for this determination is explained below.

¹¹ California Department of Conservation Farmland Mapping and Monitoring Program, Riverside County Important Farmland (2010).

Threatened or Endangered Species			X	See Sections 3.1.7 and 3.1.10.
Wastes, Hazardous or Solid		X		See Section 3.1.9.
Water Quality – Surface and Ground			X	See Section 3.1.3.
Wetlands and Riparian Zones			X	See Section 3.1.7.
Wild and Scenic Rivers	X			This element is not present on or near the expanded quarry site and is not further analyzed in this EA-IS/MND.
Wilderness	X			This element is not present on or near the expanded quarry site and is not further analyzed in this EA-IS/MND.

In addition to the elements listed under Supplemental Authorities above, the BLM considers other resources and uses that occur on public lands and the issues that may result from the implementation of the Proposed Action. Other resources or uses of the human environment that have been considered for this EA-IS/MND are listed in Table 3-2. Resources or uses that may be affected by the Proposed Action are described in Section 3.2, below.

Table 3-2: Additional Affected Resources

Other Resources or Uses	Not Present	Present/ Not Affected	Present/ Potentially Affected	Rationale/Reference Section
Fuels, Fire Management	X			Use is not present.
Geology and Mineral Resources		X		See Section 3.1.4.
Land Use		X		See Section 3.1.5.
Livestock Grazing	X			The rationale for this determination is explained below.
Paleontological Resources	X			See Section 3.1.4.
Noise		X		Based on a preliminary assessment of the potential noise impact of the Proposed Action, the issue was eliminated from further evaluation in this EA-IS/MND. This determination is discussed below.
Recreation		X		The rationale for this determination is explained below.
Socioeconomic Values		X		The rationale for this determination is explained below.
Soils		X		See Section 3.1.4.
Special-Status Species (Plants and Animals)			X	See Sections 3.1.7 and 3.1.10.
Traffic			X	See Section 3.1.6
Vegetation			X	See Section 3.1.7.
Visual Resources			X	See Section 3.1.8.
Wildlife			X	See Section 3.1.10.

Livestock Grazing

The project site is within the Whitewater Canyon Grazing Allotment; however, no grazing activities occur on the project site or areas proposed for quarry expansion and reclamation. No grazing activities are proposed as part of the quarry expansion or site reclamation.

Noise

The proposed expansion of the Super Creek Quarry would not increase the noise levels beyond what is typical of existing mining activities at the site. Plant operation will not be altered as a result of the expansion in quarry footprint. The plant would use the same equipment and continue its current operation at an identical annual extraction rate. The noise levels generated by mining equipment vary greatly depending on factors such as the type of equipment, the specific model, the operation being performed, the condition of the equipment, and the distance between the equipment and the nearest receptor. Noise levels diminish rapidly with distance from the source at a rate of approximately 6 dBA per doubling of distance.¹² For example, a noise level of 86 dBA measured at 50 feet from the noise source to the receptor would reduce to 80 dBA at 100 feet.

The U.S. Environmental Protection Agency (USEPA) has compiled data regarding construction equipment noise levels.¹³ Based on the USEPA's quantitative approach, the existing noise levels associated with on-site mining equipment would result in a combined total equivalent noise level (L_{eq}) of 62.4 decibels (dBA) at a distance equal to the distance from the quarry to the nearest sensitive receptor. This approach assumes that all equipment is operating at the same time and the nearest sensitive receptor is located approximately 3,000 feet away.

The Super Creek Quarry is not located within an airport land use plan or within 2 miles of an airport or heliport. The nearest location is the Palm Springs Airport approximately 10 miles to the southeast. Therefore, no impacts associated with airport noise are expected from the currently proposed modifications.

After the expansion of the quarry footprint, the mining equipment and the operations would remain the same as the existing conditions. The ambient noise levels would not be expected to increase, and the Proposed Action impacts with regard to noise would not be considered adverse. Therefore, no further analysis of this issue is required.

Recreation

Recreational use of the current quarry site and areas proposed for quarry expansion is limited to hunting, rock hounding, and bird watching and other passive recreational activities. As noted, the project area is remote and not near any established recreational hiking trails, and use of the area for recreation has historically been light. Because the Proposed Action would expand current operations, as opposed to introducing activities into a previously undisturbed area, the action would not be expected to affect current or future recreational use.

¹² A dBA is a unit of noise measurement in decibels that is weighted for frequencies to which humans are sensitive ("A-weighting").

¹³ U.S. Environmental Protection Agency, Noise from Construction Equipment and Operations, Building Equipment and Home Appliances, December 1971.

Socioeconomic Values

The workforce required to operate the mine and related facilities over the 25-year life span of the Proposed Action would include as many as 10 individuals in a given day. The workers would most likely live in Desert Hot Springs or nearby communities, which would result in beneficial impacts to the local economy, as the workers would obtain lodging, meals, and supplies in the local community. The Proposed Action would involve the continuation of existing operations, so no new facilities or housing would need to be constructed to accommodate workers, and the Proposed Action would not be expected to impact the local housing supply or public or private services. Impacts, if any, on socioeconomic values would be beneficial to the local economies. For these reasons, this resource is not analyzed further in this EA-IS/MND.

3.1.1 Air Quality and Climate Change/Greenhouse Gases

The project area is located within the South Coast Air Basin (Basin), under the jurisdiction of the SCAQMD. The SCAQMD has ambient air quality monitoring stations that measure ozone (O₃), carbon monoxide (CO), nitrogen oxide (NO_x), sulfur oxide (SO_x), and particulate matter (PM₁₀ and PM_{2.5}).

The USEPA and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants. Table 3-3 shows the federal and state standards.

Measurements of ambient concentrations of the criteria pollutants are used by the USEPA and CARB to assess and classify the air quality of each air basin, county, or, in some cases, a specific urbanized area. The classification is determined by comparing actual monitoring data with state and federal standards. If a pollutant concentration in an area is lower than the standard, the area is classified as being in “attainment.” If the pollutant exceeds the standard, the area is classified as a “nonattainment” area. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated “unclassified.” Table 3-4 (Attainment Status of South Coast Air Basin) shows the attainment status for criteria air pollutants in the Basin.

The SCAQMD and the Southern California Association of Governments (SCAG) are the agencies responsible for preparing the Air Quality Management Plan (AQMP) for the Basin. Once adopted, the AQMP becomes a portion of California’s State Implementation Plan (SIP) describing the plan to bring the Basin into attainment with the national ambient air quality standards and California ambient air quality standards. The most recent plan is the 2012 AQMP adopted on December 7, 2012. The 2012 AQMP is designed to meet the state and federal Clean Air Act planning requirements and focuses on new federal ozone and PM_{2.5} standards. The 2012 AQMP incorporates significant new emissions inventories, ambient measurements, scientific data, control strategies, and air quality modeling including transportation conformity budgets that show vehicle miles traveled (VMT) emissions offsets following the recent changes in USEPA requirements.

Table 3-3: State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	California Standard	Federal Primary Standard	Major Sources
Ozone (O ₃) ⁽¹⁾	1 hour	0.09 ppm	—	Internal combustion engines, coatings, and solvents
	8 hours	0.070 ppm	0.075 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines
	8 hours	9 ppm	9 ppm	
Nitrogen Dioxide (NO ₂) ⁽²⁾	Annual Average	0.030 ppm	0.053 ppm	Internal combustion engines and industrial processes
	1 hour	0.18 ppm	—	
Sulfur Dioxide (SO ₂)	Annual Average	—	0.03 ppm	Internal combustion engines, chemical plants, sulfur recovery, and metal processing
	1 hour	0.25 ppm	0.075 ppm	
	24-hours	0.04 ppm	0.14 ppm	
Suspended Particulates (PM ₁₀)	Annual Arithmetic Mean	20 µg/m ³	—	Dust from agricultural and construction, combustion, natural activities
	24 hours	50 µg/m ³	150 µg/m ³	
Fine Particulates (PM _{2.5}) ⁽³⁾	Annual Arithmetic Mean	12 µg/m ³	12 µg/m ³	Primarily from internal combustion engines
	24 hours	—	35 µg/m ³	
Lead (Pb)	Monthly	1.5 µg/m ³	—	Lead smelters and lead battery manufacturing & recycling
	Quarterly	—	1.5 µg/m ³	
Sulfates (SO ₄)	24 hours	25 µg/m ³	—	Industrial processes

Source: CARB 2014.
 Notes: ppm = parts per million, µg/m³= micrograms per meter cubed
⁽¹⁾ USEPA recently updated the 8-hour O₃ standard from 0.8 ppm to 0.075 ppm
⁽²⁾ CARB updated the state nitrogen dioxide standard in 2007 from 0.25 ppm to 0.18 ppm
⁽³⁾ USEPA recently updated the 24-hour PM_{2.5} standard from 65 µg/m³ to 35 µg/m³

Project Area Climate and Topography

The average maximum temperature in the area is 108.3 degrees Fahrenheit (°F) in July and the average minimum temperature is 42.1°F in December. Average precipitation totals approximately 5.53 inches per year and tends to peak in January.¹⁴ Elevations on the project site range from approximately 2,000 feet amsl in the southeast corner of the site to approximately 2,450 feet amsl on the hilltop, in the west-central area.

¹⁴ Western Regional Climate Center. 2013. Palm Springs, California (046635), Period of Record Monthly Climate Summary. Accessed August 14, 2013, available at <http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?caplms+sca>

Table 3-4: Attainment Status of South Coast Air Basin

Pollutant	State	Federal
Ozone (O ₃)	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment	Attainment
Nitrogen Dioxide (NO ₂)	Attainment	Attainment
Sulfur Dioxide (SO ₂)	Attainment	Attainment
Suspended Particulates (PM ₁₀)	Nonattainment	Nonattainment
Fine Particulates (PM _{2.5})	Nonattainment	Nonattainment
Lead (Pb)	Attainment	Attainment
Sulfates (SO ₄)	Unclassified	Unclassified

Source: CARB 2013.

Climate Change and Greenhouse Gas Emissions

Parts of the earth’s atmosphere act as an insulating blanket of the right thickness to trap sufficient solar energy and keep the global average temperature in a suitable range. The “blanket” is a collection of atmospheric gases called greenhouse gases based on the idea that these gases trap heat like the glass walls of a greenhouse. These gases, mainly water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), ozone (O₃), and chlorofluorocarbons (CFCs), all act as effective global insulators, reflecting visible light and infrared radiation back to earth. Human activities, such as producing electricity and driving internal combustion vehicles, have contributed to the elevated concentration of these gases in the atmosphere. This, in turn, is causing the earth’s temperature to rise. A warmer earth may lead to changes in rainfall patterns, smaller polar ice caps, a rise in sea level, and a wide range of impacts on plants, wildlife, and humans.

Climate change could have a number of adverse effects. Although these effects would have global consequences, in most cases they would not disproportionately affect any one site or activity. In other words, many of the effects of climate change are not site-specific. Emission of GHGs would contribute to the changes in the global climate, which would in turn, have a number of physical and environmental effects including sea level rise and flooding, reduction in water supply, water quality degrade, adverse impacts on ecosystems and biodiversity, and increased risk of human health problems.

3.1.2 Cultural Resources

Three cultural resource studies were conducted by CRM TECH in 2004, 2006, and 2013 for the proposed Super Creek Quarry Expansion project area. The surveys addressed three separate Areas of Potential Effect (APE) corresponding to the boundaries of the limits of disturbance for mining and waste placement. In 2004, 12.3 acres of the northern portion of the proposed quarry area were surveyed. In 2006, 7.6 acres of the eastern portion of the mine, nearer Super Creek,

were evaluated, and in 2013, 11 acres of the southern portion of the quarry area, including the southwest waste placement area, were surveyed.^{15,16,17}

The cultural resource studies included literature reviews, records searches, Native American information scoping, and intensive field surveys, which encountered no historic properties as defined by the NHPA adjacent to or within the APEs.

The project area, which includes the APEs, is located on lands administered by the BLM and is subject to the provisions of the NHPA. The NHPA of 1966, as amended, sets forth national policy and procedures regarding historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places. Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on such properties and to allow the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on those undertakings, following regulations issued by the ACHP [36 Code of Federal Regulations (CFR) 800].

Literature Review and Records Search

Literature reviews and records search were conducted for the APEs and for all lands within a 1-mile buffer. The initial record search was conducted on August 26, 2004, by a CRM TECH archaeologist at the Eastern Information Center (EIC) located at the University of California, Riverside. The results of this search were used for the 2006 study. An updated EIC records search was completed on May 10, 2013, to support the 2013 study.

The 2004 and the 2013 records searches yielded similar results and indicated that none of the APEs had been previously surveyed. In addition, no cultural resources had been recorded within or adjacent to any of the APEs. The 2004 records search identified seven previous surveys within the 1-mile buffer, which documented four prehistoric and two historic-era resources. In 2013, 12 previous surveys were identified within the 1-mile buffer of the APE. Three prehistoric and four historic-era resources were documented as a result of these surveys. None of the previously recorded resources were found in the immediate vicinity of the project area, and thus none of the resources were given further consideration.^{18,19}

Native American Heritage Commission Records Search

CRM TECH requested a search of the NAHC Sacred Lands File (SLF) on August 23, 2004, to determine whether any Native American cultural resources were present within or near the vicinity of the APE. The response from the NAHC was received on August 31, 2004, and

¹⁵ CRM TECH, Identification and Evaluation of Historic Properties, Super Creek Quarry Expansion White Water Area, Coachella Valley, Riverside County, California, September 28, 2004.

¹⁶ CRM TECH, Addendum to Historical/Archaeological Survey Report, Super Creek Quarry Expansion Project White Water Area, Coachella Valley, Riverside County, California, November 26, 2006.

¹⁷ CRM TECH, Identification and Evaluation of Historic Properties Super Creek Quarry Expansion, Unincorporated White Water Area, Riverside County, California, July 17, 2013.

¹⁸ CRM TECH, Identification and Evaluation of Historic Properties, Super Creek Quarry Expansion White Water Area, Coachella Valley, Riverside County, California, September 28, 2004.

¹⁹ CRM TECH, Identification and Evaluation of Historic Properties Super Creek Quarry Expansion, Unincorporated White Water Area, Riverside County, California, July 17, 2013.

indicated that no Native American resources were known within the APE. However, the NAHC noted that the SLF is not exhaustive and provided a listing of Native American contacts that might have knowledge about the APE and about any sacred sites or resources not listed in the SLF. For this reason, letters to each of the listed tribal contacts were sent on September 2, 2004. Follow-up phone calls were then placed to all of the Native American contacts between September 15 and 28, 2004. A total of eight responses were received during the 2004 scoping process. Of these eight responses, several representatives expressed concerns over the cultural and archaeological sensitivity of the area, but no specific sites were identified.²⁰ Neither an NAHC SLF search nor information scoping was conducted for the 2006 study.²¹

A second NAHC SLF search was requested by CRM TECH on May 8, 2013. The response from the NAHC was received on June 11, 2013, and indicated that no Native American resources were known within the APE. However, the NAHC noted that the area around the APE is culturally sensitive and provided a listing of Native American contacts that might have knowledge about the APE. CRM TECH contacted tribal representatives between June 19 and July 12, 2013. As of the date of this EA-IS/MND, seven tribal representatives have responded to CRM TECH. The majority of the responses expressed concerns over the cultural and archaeological sensitivity of the area, but no specific sites were identified.²² Specifically, Judy Stapp, Director of Cultural Affairs for the Cabazon Band of Mission Indians, Daniel McCarthy, Director of the Cultural Resources Management Department at the San Manuel Band of Serrano Mission Indians, and Goldie Walker, Chairwoman of the Serrano Nation of Mission Indians, indicated that they were not aware of any specific cultural resources in the APE. However, Mr. McCarthy recommended monitoring during ground-disturbing activities in the APE. William Madrigal Jr. of the Morongo Band stated that the APE is located in an area of great concern to the Tribe. Therefore, he recommended Native American monitoring during all surveys and ground-disturbing activities, and requested a site visit in order to assess the APE. BLM staff will be responsible for arranging the site visit and consulting with the Morongo Band prior to any mining or permanent waste placement in new areas authorized by this project. Morongo Tribal Elder Ernest Siva reiterated the cultural sensitivity of the APE and the recommendation that Native American monitoring be required during all future surveys and ground-disturbing activities. Finally, Steven Estrada of the Santa Rosa Band concurs that the Whitewater area is culturally sensitive and requested that a Native American monitor, from either the Morongo Band or the Agua Caliente Band, be present during all ground-disturbing activities associated with the Proposed Action.²³

Intensive Pedestrian Survey

On September 7, 2004, CRM TECH archaeologists conducted an intensive pedestrian survey of the northern portion of the proposed quarry portion of the project site. Archaeologists visually

²⁰ CRM TECH, Identification and Evaluation of Historic Properties, Super Creek Quarry Expansion White Water Area, Coachella Valley, Riverside County, California, September 28, 2004.

²¹ CRM TECH, Addendum to Historical/Archaeological Survey Report, Super Creek Quarry Expansion Project White Water Area, Coachella Valley, Riverside County, California, November 26, 2006.

²² CRM TECH, Identification and Evaluation of Historic Properties Super Creek Quarry Expansion, Unincorporated White Water Area, Riverside County, California, July 17, 2013.

²³ CRM TECH, Identification and Evaluation of Historic Properties Super Creek Quarry Expansion, Unincorporated White Water Area, Riverside County, California, July 17, 2013.

surveyed the area by walking parallel transects spaced 15 meters apart. In areas of rocky terrain, the ground surface was inspected by walking along the crest and base of knolls. Ground exposure was approximately 90 percent, thereby providing excellent surface visibility. No potential resources were noted during the survey. A brass U.S. Coast and Geodetic Survey Marker dated 1950 and a rock cairn were observed. The geodetic marker was considered to be ubiquitous and the rock cairn modern, and neither were recorded during the survey as a result.

On November 17, 2006, an intensive pedestrian field survey of the eastern portion of the project site, nearer Super Creek, was conducted by a CRM TECH archaeologist. The archaeologist utilized the same survey methods as the 2004 survey. Surface visibility was excellent at 70 to 100 percent, due to minimal vegetation. No potential resources were documented during the survey. It was noted that scattered mining activities were present within the 2006 APE; however, it was determined they were not of historic age and required no further investigation or documentation.

An intensive pedestrian survey was conducted for the southern portion of the proposed quarry portion of the project area by a CRM TECH archaeologist on May 16, 2013. The archaeologist surveyed the area using parallel transects spaced 15 meters apart. Steep terrain in portions of the APE made the transect method impractical, and the area was visually inspected along ridgelines and drainages. Ground visibility ranged from 70 to 100 percent. During the pedestrian survey, no cultural resources were observed within the 2013 APE.

Additional information regarding the assessment of the APEs and the Native American correspondence can be found in the Identification and Evaluation of Historic Properties reports.^{24,25,26}

3.1.3 Drainage, Erosion, and Sediment

Topography and Climate

The project site is located in the lower elevations of the southeastern reaches of the San Bernardino Mountains. The regional topography is in a youthful stage of development characterized by rugged terrain with very steep slopes exceeding 1H:1V (horizontal:vertical) and high stream gradients. The general topography at the project site is very rocky and rugged, with two prominent rocky knolls. Elevations on-site range from approximately 2,000 feet amsl in the southeast corner of the site to approximately 2,450 feet amsl on the hilltop in the west-central area. The northeast and east slopes of the project site (outside the quarry area but within the project boundary) are steep and highly dissected.

The average maximum temperature in the area is 108.3°F in July and the average minimum temperature is 42.1°F in December. Average precipitation totals approximately 5.53 inches per year and tends to peak in January.²⁷ Prevailing winds are west to east.

²⁴ CRM TECH, Identification and Evaluation of Historic Properties, Super Creek Quarry Expansion White Water Area, Coachella Valley, Riverside County, California, September 28, 2004.

²⁵ CRM TECH, Addendum to Historical/Archaeological Survey Report, Super Creek Quarry Expansion Project White Water Area, Coachella Valley, Riverside County, California, November 26, 2006.

²⁶ CRM TECH, Identification and Evaluation of Historic Properties Super Creek Quarry Expansion, Unincorporated White Water Area, Riverside County, California, July 17, 2013.

Surface Hydrology

Surface water features in and near the project site are Super Creek to the east and ephemeral drainages that are tributary to the Whitewater River to the west. During the biological resources evaluation for the Proposed Action in 2013, approximately 1.33 acres of stream beds were recorded within the project boundary.²⁸

Super Creek is an intermittent stream/dry channel at the base of a canyon at approximately 1,450 feet amsl and runs along the northeast and east sides of the project site. There are several stormwater detention basins at the base of the East Tailings Slopes, upslope from Super Creek, and separated from Super Creek by a berm containing the mine's access road to the east slopes.

Super Creek extends from its watershed approximately 0.25 mile north of the project site and flows generally south out of the hills to its alluvial fan approximately 0.75 mile south of the project area. From there, Super Creek generally fans eastward into numerous channels and is impacted by numerous roads related to the densely developed wind farms located throughout its length south of the project area before reaching I-10. This region is highly erosive, and sediment transport from the hills into Super Creek and other drainages during rainfall events and its transport into the Banning Pass and Whitewater River is a natural part of the hydro-geomorphic process. The sand and sediments eroded from the hills and transported by these fluvial processes are a very important source for blowsand, which is deposited in a broad area below the San Andreas fault.

The Super Creek watershed is within the Upper Mission Creek/Big Morongo Canyon Conservation Area, as identified in the CVMSHCP. The areas of the mine and to the south to I-10 are defined as a sand source, and Super Creek is shown as providing sand transport. Based on the CVMSHCP, the principal function of Super Creek is related to the transport of sediment and sands for eventual wind transport to sensitive blowsand habitat areas, not for its wash habitat, which is not evident. As described in more detail in Section 4.1.7.2 (Vegetation Impact), the blowsand is habitat for many listed and sensitive species. The mine activities, the erosion control sedimentation basins, and the access road reportedly have not directly altered the streambed, impacted any sensitive habitat, or hindered its ability to transport sediment and sand downstream.

The Whitewater River is situated approximately 0.5 mile to the west of the project site in a canyon at approximately 1,700 feet amsl. There are small ephemeral drainages on the west side of the project site (western mining expansion area) that are tributary to the Whitewater River.²⁹ The Whitewater River is a major drainage course in the region. There is perennial flow in the mountains, but because of diversions and percolation into the basin, the river becomes dry farther downstream. The constructed downstream extension of the river channel (the Coachella Valley

²⁷ Western Regional Climate Center. 2013. Palm Springs, California (046635), Period of Record Monthly Climate Summary. Accessed August 14, 2013, available at <http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?caplms+sca>

²⁸ Lilburn Corporation, Biological Resources Assessment for the Revised Plan of Operations and Amended Reclamation Plan for the Super Creek Quarry, August 2013, p.18.

²⁹ Lilburn Corporation, Biological Resources Assessment for the Revised Plan of Operations and Amended Reclamation Plan for the Super Creek Quarry, August 2013, p.26 and Figure 7.

Storm Water Channel) serves as a drainageway for irrigation return flows, treated community wastewater, and storm runoff.³⁰

The project site is not located in a recognized floodway or 100-year floodplain, nor is it subject to flash flooding.³¹

Drainage and Erosion/Sediment Control

The existing quarry and proposed expansion area only generate surface runoff as a result of precipitation that falls directly on the site. The existing drainage system that receives runoff is self-contained, with the quarry pit acting as a retention area.

The native bulk rock is not highly erodible, but the tailings slopes contain fine materials that are erodible. The mine operator has placed or backfilled existing rills and gullies with graded rock material to break up concentrated flows and to reduce velocity within the gullies to decrease erosion potential. Narrow horizontal benches or terraces a minimum of 2 to 3 feet wide at 25-foot intervals have been cut into the face of the slope. Where existing erosional rills are present, the benches were reinforced with rock riprap of appropriate size and/or with straw wattles to limit further erosion. The operator also uses an excavator and a crane with a rigged sled to remove excess fines from the top of the slopes to reduce erosion potential.

Riprap was previously placed along the base of the East Tailings Slopes where an adequate bench is present between the toe of the slope and the access road along Super Creek in accordance with the approved 1993 Reclamation Plan. Where closely spaced, the riprap has reduced runoff velocity sufficiently to allow deposition of entrained sediment, which has promoted establishment of grasses and brush. In some locations, the riprap is too widely spaced to allow for revegetation.

Twelve sedimentation basins were also constructed along the base of the East Tailings Slopes within the project site just above Super Creek and west of the access road in November 2007 to collect and limit fines erosion and runoff. Active deposition of tailings onto the East Tailings Slopes ended in March 2008. Reclamation of these slopes to reduce and limit erosion of the fine materials is ongoing.

The access road along Super Creek is bermed adjacent to the creek, and the roadbed is angled inward toward the waste material slope. A drainage channel along the inside of the road intercepts runoff from the slopes and conveys flows downstream through a series of narrow detention basins and along the inside edge of the road to a point where the gradient flattens. The conveyance channel joins Super Creek at the access road crossing located south of the southeastern project boundary. The access road provides easy access for removal of accumulated sediment in the basins.

³⁰ Colorado River Basin Regional Water Quality Control Board, Water Quality Control Plan Colorado River Basin – Region 7, 2006, p.1-11.

³¹ Lilburn Corporation, Super Creek Quarry Expansion Revised BLM Plan of Operations and Amended Reclamation Plan No. 137 CA ID #91-33-0003, prepared for Painted Hills Mining Company, January 2013, p.20.

Groundwater

Groundwater in the vicinity of the project site is at an elevation of approximately 1,000 feet amsl, or about 1,125 feet below the minimum quarry elevation of 2,125 feet amsl. There are no known barriers or restrictions to groundwater subsurface flow within the project site. The site is not within a groundwater recharge area; however, drainage west of the project area drains to the Whitewater River, which is a groundwater recharge area.

Groundwater is used at the quarry only for dust suppression activities (spraying roads, active stockpiles, and active mining areas). Water is obtained from an off-site well at the Painted Hills retail site. There are no on-site groundwater wells. The amount used varies greatly and depends on a variety of factors (i.e., weather conditions, production rate, etc.). Historically, however, less than 4,000 gallons per day (less than 4 acre-feet per year) has been required. A water truck transports water to the project site daily as needed. Bottled drinking water is provided for employees and vendors.

Regulations and Permits

The project site is within the West Colorado River Basin, Whitewater Hydrologic Unit. Water quality objectives and beneficial uses of surface water and groundwater are defined in the Water Quality Control Plan (2006, as amended), which is implemented by the Colorado River Regional Water Quality Control Board. Potential beneficial uses for unlisted intermittent streams, such as Super Creek, are determined on a case-by-case basis. Existing beneficial uses for the Whitewater River are municipal and domestic supply, agriculture supply, groundwater recharge, water contact and non-contact water recreation, cold freshwater habitat, wildlife habitat, and hydropower generation, and intermittent beneficial use for warm freshwater habitat.³² Total maximum daily loads (TMDLs) have not been adopted for Super Creek or the Whitewater River.³³

Super Creek and the four ephemeral drainages identified within the project area are tributary to the Whitewater River that is a tributary of the Salton Sea, a Traditional Navigable Water. As such, actions affecting any tributaries of this body of water are regulated by the U.S. Army Corps of Engineers (USACE) under Sections 404 and 401 of the Clean Water Act. Also, under Section 1602 of the California Fish and Game Code, the California Department of Fish and Wildlife (CDFW) has jurisdiction over any feature that contains a bed, bank, or channel. Drainages observed on-site exhibit these features and are regulated by the CDFW.

The Super Creek Quarry operates under a NPDES General Permit for Storm Water Discharges Associated with Industrial Activities (“Industrial Permit”). Under this permit, owner/operators are responsible for self-monitoring and collecting data about stormwater discharges from the permitted facility. The Industrial Permit requires that stormwater samples be collected and analyzed for pH (a measure of acidity/alkalinity), total suspended solids (TSS, a measure of undissolved solids such as sediment), specific conductance (SC, a measure of how water

³² Colorado River Basin Regional Water Quality Control Board, Water Quality Control Plan Colorado River Basin – Region 7, 2006, Table 2-3 (Beneficial Uses of Surface Waters in the West Colorado River Basin).

³³ Colorado River Basin Regional Water Quality Control Board, 2010 Clean Water Act Section 303(d) List of Water Quality Limited Segments. USEPA approval date: October 11, 2011.

conducts an electrical current), total organic carbon (TOC, a measure of how much carbon-containing organic matter), and oil and grease (O&G). Quarterly results, along with visual observations, must be reported to the Colorado River Regional Water Quality Control Board.

Under the NPDES program, the owner/operator is also required to use stormwater BMPs to control pollutants in stormwater runoff and to implement a stormwater pollution prevention plan (SWPPP) that identifies measures and monitoring procedures. Stormwater BMPs at the existing quarry include the sedimentation basins along with water bars, straw wattles, and excelsior fencing.

3.1.4 Geology, Soils, Mineral Resources, and Paleontology

Geology

The project site is located in the lower elevations of the southeastern reaches of the San Bernardino Mountain Range, in the Transverse Ranges Geomorphic Province. The regional topography is in a youthful stage of development characterized by rugged terrain with very steep slopes exceeding 1H:1V (horizontal:vertical). The geologic setting of the Proposed Action vicinity comprises older (Precambrian and Paleozoic) intrusive bedrock, much of which was altered through metamorphic and tectonic processes (such as at the project site), and younger (Cenozoic) sedimentary rock formations derived from eroded materials during mountain-building episodes. Unconsolidated alluvial materials are present in stream channels, washes, and terraces.

The region's tectonic framework is the result of movement of the North American plate against the Pacific Plate along the San Andreas fault zone, which is locally divided into several east-west-trending segments. The San Bernardino Mountains segment is a structurally complex zone northwest of the City of Desert Hot Springs and contains several sub-parallel faults, including the Coachella Valley segment (Mission Creek), the San Gorgonio fault, and Banning fault, which is the southernmost strand of the San Andreas fault zone in the area. It consists of three segments, with activity appearing to have shifted eastward over time. The Banning fault is believed to be the source of the 1986 North Palm Springs earthquake.³⁴

The geologic units at the Super Creek Quarry site consist predominantly of Precambrian to Mesozoic granitic/gneissic bedrock, Quaternary (Holocene) alluvium and colluvium, and fill. The gneissic rock is exposed in the southwestern and northern portions of the site. It is highly deformed and foliated. Foliated granitic/gneissic rock is mapped in the central portion of the site. This is the unit currently being quarried and is referred to as "Palm Springs Gold." Exposed on the upper slope faces and along a northeasterly-trending ridge in the proposed expansion area, this unit is a highly weathered light-colored rock with relict sedimentary features. This unit is highly deformed, fractured, and folded. Locally, foliation dips to the north at shallow to steep angles. The contact between the foliated granitic/gneissic and gneissic geologic units appears to be a high angle, northeast-dipping structure. Based on the exposures of the contact in the northeastern and southern portions of the quarry, it appears that the foliated granitic/gneissic unit may be country rock caught within the major metamorphic unit. Smaller outcrops of the foliated granitic/gneissic unit within the main metamorphic unit appear in various places through the

³⁴ City of Desert Hot Springs, Comprehensive General Plan, General Plan/Geotechnical Element, adopted September 5, 2000, p.V-6.

quarry and adjacent to the quarry. There are small areas of late Cenozoic marine sedimentary rocks at lower elevations near Super Creek. Younger colluvium composed of silty sand with gravel overlies the bedrock along the slope faces across the site. Deposits of younger alluvium are mapped in the stream channel bottoms associated with Super Creek. This unit is primarily composed of silty sand with gravel. All mine spoil is considered fill, which includes tailings and material placed for fill for roads and equipment pads, and ranges up to 30.5 feet below ground surface (bgs).³⁵

No known faults pass through the project site. The Banning fault is less than 0.5 mile south of the quarry.³⁶ Severe seismic shaking can be expected to occur during the lifetime of the Proposed Action. However, because the site is underlain by bedrock at shallow depths, the potential for liquefaction is nonexistent.³⁷ The State of California has not delineated an Alquist-Priolo Earthquake Fault Zone at the project site.³⁸

There is no aquifer underlying the project site, but seasonal precipitation can result in periodic groundwater in joints and fissures within the bedrock. Given the thoroughly fractured character of the bedrock, the arid climate, and infrequent and light precipitation, it appears unlikely that significant amounts of groundwater will ever reach the contact between tailings and bedrock.³⁹

Slope Stability

The native slopes are bedrock with little to no soil cover and are considered to have a very low susceptibility to surficial failure. The tailings slopes on the project site have accumulated at the site since the 1950s, with no deep-seated slope failures observed by the current owner/operator. There were no deep-seated failures reported as a result of the nearby Richter magnitude M5.6 1986 Palm Springs earthquake (the owner was on-site at the time of this event).⁴⁰

As part of preparation of the plan of operations (mining and reclamation), the stability of the tailings slopes was evaluated in 2007, 2008, 2009, 2010, and 2012. The investigations consisted of field observations and testing and laboratory analysis combined with the use of computer models to predict the potential for landslides or slope failures.⁴¹ The most current (2012) study, which supplemented previous studies, was prepared in response to specific SMGB comments on conclusions of the previous studies.

³⁵ CHJ Consultants, Slope Stability Investigation, Existing Tailings Slopes and Proposed Expansion Slopes of Super Creek Quarry, Whitewater River Area, Riverside County, California, prepared for Whitewater Rock & Supply Company, February 15, 2011.

³⁶ Lilburn Corporation, Super Creek Quarry Expansion Revised BLM Plan of Operations and Amended Reclamation Plan No. 137 CA ID #91-33-0003, prepared for Painted Hills Mining Company, January 2013.

³⁷ CHJ Consultants, Supplemental Slope Stability Investigation, Existing Tailings Slopes and Proposed Expansion Slopes of Super Creek Quarry, Whitewater River Area, Riverside County, California, prepared for Painted Hills Mining Company, May 31, 2012.

³⁸ California Geological Survey, State of California Earthquake Fault Zones, White Water Quadrangle (June 1, 1995) and Desert Hot Springs Quadrangle (January 1, 1980).

³⁹ CHJ Consultants, Slope Stability Investigation, Existing Tailings Slopes and Proposed Expansion Slopes of Super Creek Quarry, Whitewater River Area, Riverside County, California, prepared for Whitewater Rock & Supply Company, February 15, 2011.

⁴⁰ CHJ Consultants, Supplemental Slope Stability Investigation, Existing Tailings Slopes and Proposed Expansion Slopes of Super Creek Quarry, Whitewater River Area, Riverside County, California, prepared for Painted Hills Mining Company, May 31, 2012.

⁴¹ As used in the investigations, the term "landslide" refers to deep-seated slope failures with a rupture surface at least 25 feet deep. Landslides are typically related to the underlying structure of the parent material. Surficial failures refer to shallow failures that affect the upper geologic material.

Mining activities have resulted in the construction of cut slopes in the northwestern portion of the site. Sidecast fill (tailings) slopes up to 325 feet high are present in the eastern portion of the site (East Tailings Slopes). The East Tailings Slopes were used to deposit waste material per the approved 1993 supplemental reclamation plan. The tailings/waste rock includes pebbles, sand, silt, and clays less than one-half inch in size. Past mining activities have shown the waste to comprise up to 50 percent of total production. Active waste sidecasting ceased in March 2008. Reclamation of these slopes has been initiated, and the slopes will continue to be reclaimed and monitored for erosion. The cut slopes are inclined at approximately 1H:1V, and the tailings slopes are inclined at approximately 1.5H:1V.

As reported in the 2012 investigation report, evidence of minor surficial failures both as talus and as shallow rotational failure within the tailings slope was observed in the quarry area. The surficial failures are manifested as an accumulation of talus on the quarry benches and toes of slopes as well as minor failures within the upper tailings slopes. Two types of shallow failures were observed in the tailings slopes. The first type occurs relatively frequently with erosional gullies as a response to oversteepening of the gully sidewalls. These occur within near-vertical gully walls, primarily with pre-SMARA slopes, and are a few feet high.^{42,43} The second type of surficial failure, consisting of soil slips in the non-eroded tailings slopes, was observed in a small area in the recent tailings in the southern portion of the site. This area consisted of three adjacent surficial failures totaling approximately 30 feet wide and a few feet deep. It appears these failures occurred on a slightly oversteepened portion of the tailings slopes that were constructed during a previous lower elevation of spoils placement. These surficial failures were the only ones observed in the non-eroded tailings slopes. The report authors concluded that the as-built, non-eroded tailings slopes are generally not susceptible to surficial failure, and no additional measures with respect to deep-seated slope stability are necessary for reclamation of the existing tailings slopes under the existing reclamation plan. The lack of susceptibility is a function of the strength of the tailings materials and the angle of the as-built slope.⁴⁴

The operator has also placed or backfilled existing rills and gullies with graded rock material to reduce stormwater runoff velocity in the gullies to decrease erosion potential. In addition, narrow horizontal benches or terraces a minimum of 2 to 3 feet wide at 25-foot intervals have been cut in to the face of the slope. Where existing rills are present, the benches were reinforced with rock riprap and/or straw wattles to limit further erosion.

⁴² CHJ Consultants, Supplemental Slope Stability Investigation, Existing Tailings Slopes and Proposed Expansion Slopes of Super Creek Quarry, Whitewater River Area, Riverside County, California, prepared for Painted Hills Mining Company, May 31, 2012.

⁴³ The erosional gullies are the result of overland flow of runoff, not soil slippage. Reference: CHJ Consultants, "Response to December 2012 SMGB/OMR Review Revised BLM Plan of Operations and Amended Reclamation Plan Super Creek Quarry (CA Mine ID #91-33-0003)" letter to Painted Hills Mining Company, January 14, 2013, p.4.

⁴⁴ CHJ Consultants, Supplemental Slope Stability Investigation, Existing Tailings Slopes and Proposed Expansion Slopes of Super Creek Quarry, Whitewater River Area, Riverside County, California, prepared for Painted Hills Mining Company, May 31, 2012.

Soils

There is no topsoil on the existing quarry area, and due to the rocky nature of the bedrock materials, very little on the proposed expansion area. Topsoil that does exist is composed of sands, silts, and clays in a very thin veneer of less than 12 inches thick.⁴⁵

Mineral Resources

The Super Creek Quarry is situated on public lands under the jurisdiction of the BLM on placer and lode mining claims controlled by Painted Hills. The mineral commodity currently mined at the Super Creek Quarry is a decorative rock named “Palm Springs Gold.” This decorative rock material has been mined almost continuously since the 1950s. This material is a brownish/red/gold, high-silica metamorphic rock. Experience from past mining at the Super Creek Quarry indicates the thickness of the proposed ore body is up to several hundred feet.

Mining operations consist of standard hillside and open pit methods. Current mining activities consist of excavating ore utilizing conventional heavy equipment and hauling spoil (consisting mostly of sand and silt) to temporary placement areas along the west side of the active pit. Currently, operations are located on approximately 23.8 acres, and inactive tailings slopes cover approximately 27 acres on the east slopes.

The State Geologist has classified aggregate resources in the Palm Springs area into mineral resource zones in accordance with SMARA. The classification report also notes “other mineral commodities.” The “Painted Hills Mine-Super Creek Quarry” is classified MRZ-2 for decorative stone.⁴⁶ The MRZ-2 classification is defined as an area where adequate information indicates significant mineral deposits are present or where it is judged that a high likelihood for their presence exists.

The City of Desert Hot Springs General Plan recognizes decorative stone as a mineral commodity produced in the Desert Hot Springs area, but the City has not identified the Super Creek Quarry as a locally important mineral resource area.⁴⁷

Paleontology

The geologic material at the project site that would be quarried is composed of igneous intrusive bedrock (granite and gneiss) that has been altered through metamorphic processes and hydrothermal alteration. This is the predominant rock type at the site. No vertebrate or invertebrate animal fossils or plant remains are known to exist in such rock, nor would any be present in the fill (waste) material from quarrying.

Three sedimentary rock formations are also present at the site, but are small in areal extent and are in areas that would not be mined or directly affected by reclamation activities: Imperial

⁴⁵ Lilburn Corporation, Super Creek Quarry Expansion Revised BLM Plan of Operations and Amended Reclamation Plan No. 137 CA ID #91-33-0003, prepared for Painted Hills Mining Company, January 2013.

⁴⁶ California Geological Survey, Update of Mineral Land Classification for Portland Cement Concrete-Grade Aggregate in the Palm Springs Production-Consumption Region, Riverside County, California. Special Report 198. 2007. Plate 1.

⁴⁷ City of Desert Hot Springs, Comprehensive General Plan, General Plan/Geotechnical Element, adopted September 5, 2000, p.IV-60.

Formation, Palm Springs Formation, and Coachella Fonglomerate. Steep exposures of the Palm Springs Formation are also present across Super Creek from the project site, and steep exposures of the Coachella Fonglomerate are also present north and northwest of the project site.⁴⁸ The Imperial Formation contains near-shore to brackish marine tropical fauna. The Palm Springs Formation is known to contain vertebrate and brackish water fossils.⁴⁹ The Holocene alluvium and colluvium associated with the Super Creek channel that may have been eroded from the Imperial and/or Palm Springs formations has a very low potential for intact fossil remains because of its young age and fluvial processes that have reworked the sediments. The Coachella Fonglomerate consists of rock debris eroded from and deposited at the base of the San Bernardino Mountains as they were being formed. Fossils have not been discovered in this formation,⁵⁰ so it is unlikely that fossils would be present on the Super Creek Quarry site.

3.1.5 Land Use

Project Site

The Super Creek Quarry is located on public lands under the jurisdiction of the BLM approximately 2 miles north of I-10, east of the Whitewater River in the western portion of the City of Desert Hot Springs in Riverside County. The quarry is situated on up to 10 placer and lode mining claims controlled by Painted Hills in Section 36, Township 2 South, Range 3 East, SBBM and in assessor's parcel number 514-260-012. Land use is exclusively mining of decorative rock reserves. The existing quarry site has been disturbed by ongoing mining activities; however, the proposed quarry expansion areas are mostly undisturbed.

Access from the retail site is currently, and will continue to be, provided by an existing BLM right-of-way (CA-22568) dirt haul road. This haul road has a locking swing gate approximately 0.5 mile south of the Super Creek Quarry.

Surrounding Land Uses

Super Creek is a desert drainage that adjoins the project site on the north and east. The Whitewater River is situated approximately 0.5 mile to the west and is within the Whitewater Canyon Reserve. The reserve boundaries do not extend to the project site. Numerous wind turbines used to generate electricity are located south and east of the project site along the mine's access road. The nearest residence to the quarry is located approximately 1 mile to the southwest on Whitewater Canyon Road, which leads north to a fishing area operated by the Wildlands Conservancy.

⁴⁸ CHJ Consultants, Slope Stability Investigation, Existing Tailings Slopes and Proposed Expansion Slopes of Super Creek Quarry, Whitewater River Area, Riverside County, California, prepared for Whitewater Rock & Supply Company, February 15, 2011. Figure "Geologic Index Map" and Jeffrey Johnston, P.G., C.E.G., Geologist, U.S. Bureau of Land Management, Palm Springs-South Coast Field Office

⁴⁹ Proctor, Richard J., Geology of the Desert Hot Springs-Upper Coachella Valley Area, California, CDMG Geology Special Report 94, 1968, p.14.

⁵⁰ Proctor, Richard J., Geology of the Desert Hot Springs-Upper Coachella Valley Area, California, CDMG Special Report 94, 1968, p.18.

Land Use Plans

California Desert Conservation Area Plan

The project site is within the planning area for the CDCA, which encompasses 25 million acres in Southern California designated by Congress in 1976 through the Federal Land Policy and Management Act. About 10 million acres are administered by the BLM. The original plan was adopted in 1980 and has been amended several times. The plan sets out goals, specific actions, and management needs for each resource in the desert. The CDCA Plan recognizes the need for certain types of development within the planning area, including mineral resources, rights-of-way for power lines and pipelines, and forage for livestock grazing.

Mining activity is monitored by the BLM under its regulations and the CDCA Plan. The plan permits the development of mineral resources on BLM-administered lands in a manner that satisfies national and local needs in an economically and environmentally sound manner. The CDCA Plan contains guidelines for mineral exploration and development. All mineral exploration and mining operations on BLM lands are subject to the Bureau's surface mining regulations under 43 CFR 3802 and 43 CFR 3809, which prohibit "undue degradation" of public lands. Requirements for reclamation are set forth in 43 CFR 3809. Currently, Painted Hills operates under an approved BLM Plan of Operations (CA-39566) and Reclamation Plan No. 137 approved by Riverside County in 1995.

The Geology, Energy, and Mineral (G-E-M) Resources Element of the CDCA Plan established specific goals and objectives pertaining to mining:

1. Within the multiple-use management framework, assure the availability of known mineral resource lands for exploration and development.
2. Encourage the development of mineral resources in a manner which satisfies national and local needs and provides for economically and environmentally sound exploration, extraction and reclamation processes.

All of the public lands in the CDCA under BLM management, except for a few small and scattered parcels (approximately 300,000 acres), have been designated geographically into four multiple-use classes. The classification was based on the sensitivity of resources and kinds of uses for each geographic area. These classes are Multiple-Use Class C, Multiple-Use Class L (Limited Use), Multiple-Class M (Moderate Use), and Multiple-Use Class I (Intensive Use).

The CDCA Plan established a Whitewater Canyon Grazing Allotment of 26,878 acres as good-condition ephemeral/grazing range with low-level livestock use. The project site is within the boundaries of the grazing allotment; however, there are no fences, cattle guards, or other rangeland improvements within the project site.

Whitewater Canyon Area of Critical Environmental Concern Management Plan

A major CDCA Plan element is designation of ACECs. There are approximately 80 ACECs in the desert, covering about 750,000 acres. These areas contain special cultural or natural resources, such as historical and Native American artifacts, endangered plant or animal species, and unique or unusual geology. The CDCA Plan includes general prescriptive measures (management requirements), based on resource values, for lands within ACECs. An individual

management plan is developed for each ACEC to ensure maintenance and long-term protection of its special values. The western part of the project site that is proposed for expansion of mining operations is within the southern portion of the Whitewater Canyon ACEC (Figure 3-1).

The Whitewater Canyon ACEC comprises approximately 11,200 acres, including 10,000 acres of federal land and approximately 1,200 acres of private land in the mountains north of San Gorgonio Pass. Public access is limited. About 75 percent of the Whitewater Canyon ACEC is within the San Gorgonio Wilderness. The CDCA Plan designates the northern two-thirds of the ACEC be managed as Class C, and the remainder as Class L (Limited Use). The project site is within the Class L (Limited Use) area. The Whitewater Canyon ACEC Management Plan acknowledges the presence of the quarry operations associated with the Proposed Action on pre-1995 claims and that expansion to the west may occur. The management plan has established the following objective that is relevant to the Proposed Action.

Objective 3. Prohibit, or minimize through mitigation, surface-disturbing activities which would conflict with highly sensitive wildlife and Native American resources within the ACEC.

Coachella Valley Multiple Species Habitat Conservation Plan

The project site is within the planning area for the CVMSHCP prepared under the Coachella Valley Association of Governments (CVAG) in 2008. The CVMSHCP is a regional multi-agency conservation plan that provides for the long-term conservation of ecological diversity in the Coachella Valley region of Riverside County. The conservation plan protects over 240,000 acres of open space and 27 species. The Super Creek watershed is within the Upper Mission Creek/Big Morongo Canyon Conservation Area. Biological resources identified in the vicinity of the project site are desert tortoise and Sonoran creosote bush scrub habitat. However, as shown in Figures 4-12(b) and 4.4-12(c) of the CVMSHCP, these resources are not identified for inclusion as protected areas at the project site (see Appendix A, Appendix N [CVMSCHP Maps]). The CVMSCHP (Figure 4-12d, Essential Ecological Processes and Biological Corridors) identifies the project area/vicinity as a sand source; sand source areas are an important component of the sand dune and sand field resources within the conservation area.⁵¹

Sand to Snow National Monument

The project site is within the boundaries of the proposed Sand to Snow National Monument. A plan has not been adopted for management of this area. Therefore, there are no applicable policies.

City of Desert Hot Springs General Plan

The area was annexed into the City of Desert Hot Springs in 2001. The City's General Plan designates the site as Open Space/Mountain Reserve (OS/MR) and the areas to the south as Industrial Energy-Related (I-E), where numerous wind-energy turbines are located. The General

⁵¹ Lilburn Corporation, Biological Resources Assessment for the Revised Plan of Operations and Amended Reclamation Plan for the Super Creek Quarry, August 2013, p.25.

Plan includes an Energy and Mineral Resources Element; however, no General Plan policies are relevant to the Proposed Action.

3.1.6 Traffic and Transportation

Saleable rock material processed at the Super Creek Quarry is transported from the quarry to the company's stock yard approximately 3.5 miles to the southwest via a dirt access road with BLM right-of-way (CA-22568). Painted Hills holds a Right-of-Way Grant for the Super Creek haul road. The grant was signed in 1993 with a 30-year effective date, and the operator will seek to extend the grant beyond 2023. The access road is approximately 15,400 feet in length and 50 feet wide. The access road intersects with the Whitewater Cutoff approximately 2,000 feet east of the Whitewater retail facility located at 58645 Old Highway 60, Whitewater, California, where processed rock is stored and sold.⁵² Sold material is transported from the retail site to I-10 via Tipton Road.

According to the project applicant, materials export from the quarry site to the Painted Hills storage and retail facilities consists of, on average, five to eight daily truck trips utilizing 20-ton over-the-road haul trucks operating on a five-day workweek. On rare occasions during periods of peak demand, the number of daily haul truck trips may be slightly higher than the average rate.

The access road is also used by quarry workers, inspectors, equipment repair personnel, and other visitors to the quarry site. Non-haul trips average approximately two to three round-trips per day, five days per week. The southernmost portion of the BLM haul road traverses San Geronio Pass wind farm facilities and is used by wind farm personnel to access those facilities. The haul road between the wind farm and the project site is gated, and public access to the road is limited.

All rock material extracted from the Super Creek Quarry and sold at the Whitewater retail facility is transported from the facility to I-10 for transport either east or west. Materials are either delivered by Painted Hills or removed from the retail site by customers using vehicles of varying sizes and capacities. The rate of transport of sold materials varies greatly, depending on market conditions.

3.1.7 Vegetation

For the purposes of this assessment, sensitive biological resources consist of special-status species of plants and sensitive natural communities, including wetlands. Special-status species include vegetation that is:

- listed and protected under the federal and/or California Endangered Species acts;
- listed and protected under other federal and/or state regulations;
- sufficiently rare to qualify for listing or protection under federal and/or state regulations; or
- considered unique or in decline by the scientific community.

Sensitive natural communities (or habitats) include (a) areas of special concern to resource agencies; (b) areas protected under CEQA, (c) areas designated as sensitive natural communities by the CDFW, (d) areas outlined in Section 1600 of the California Fish and Game Code,

⁵² Based on on-site observations and review of aerial photograph publicly available on "Google Earth."

(e) areas regulated under Section 404 of the Clean Water Act (CWA), and (f) areas protected under local regulations and policies.

A general survey for biological resources and jurisdictional delineation was performed within the project area on May 30 and 31, 2013.⁵³ The area is characterized as primarily brittlebush-white bursage habitat with areas of disturbed habitat and stream habitat. The dominant vegetation, brittlebush-white bursage, is not considered sensitive by regulatory agencies or under local plans. This natural community is scrub dominated with stands of brittlebush (*Encelia farinosa*) and/or white bursage (*Ambrosia dumosa*). Other species noted within this habitat include barrel cactus (*Ferocactus cylindraceus*), cholla (*Opuntia* sp.), clustered barrel cactus (*Echinocactus polycephalus*), hedgehog cactus (*Echinocerus engelmannii*), jojoba (*Simmondsia chinensis*), pygmy cedar (*Peucephyllum schottii*), and teddy-bear cholla (*Opuntia bigelovii*). The disturbed habitat includes areas that have been altered due to anthropogenic activities and are also not considered sensitive by regulatory agencies or under local plans. Disturbed habitat within the project area consists of lands altered by mining activities and associated areas, such as access roads. Species identified in this habitat are primarily non-native, such as short-podded mustard (*Hirschfeldia incana*), London rocket (*Sisymbrium irio*), Russian thistle (*Salsola tragus*), red brome (*Bromus madritensis*), and riggut brome (*Bromus diandrus*). Lastly, portions of the project area are classified as stream habitat. These areas comprise potentially jurisdictional features that are considered sensitive under federal and state regulations. Therefore, stream habitat is discussed in further detail below in the Sensitive Natural Communities, Including Wetlands subsection, below.

⁵³ Lilburn Corporation, Biological Resources Assessment for the Revised Plan of Operations and Amended Reclamation Plan for the Super Creek Quarry, August 2013.

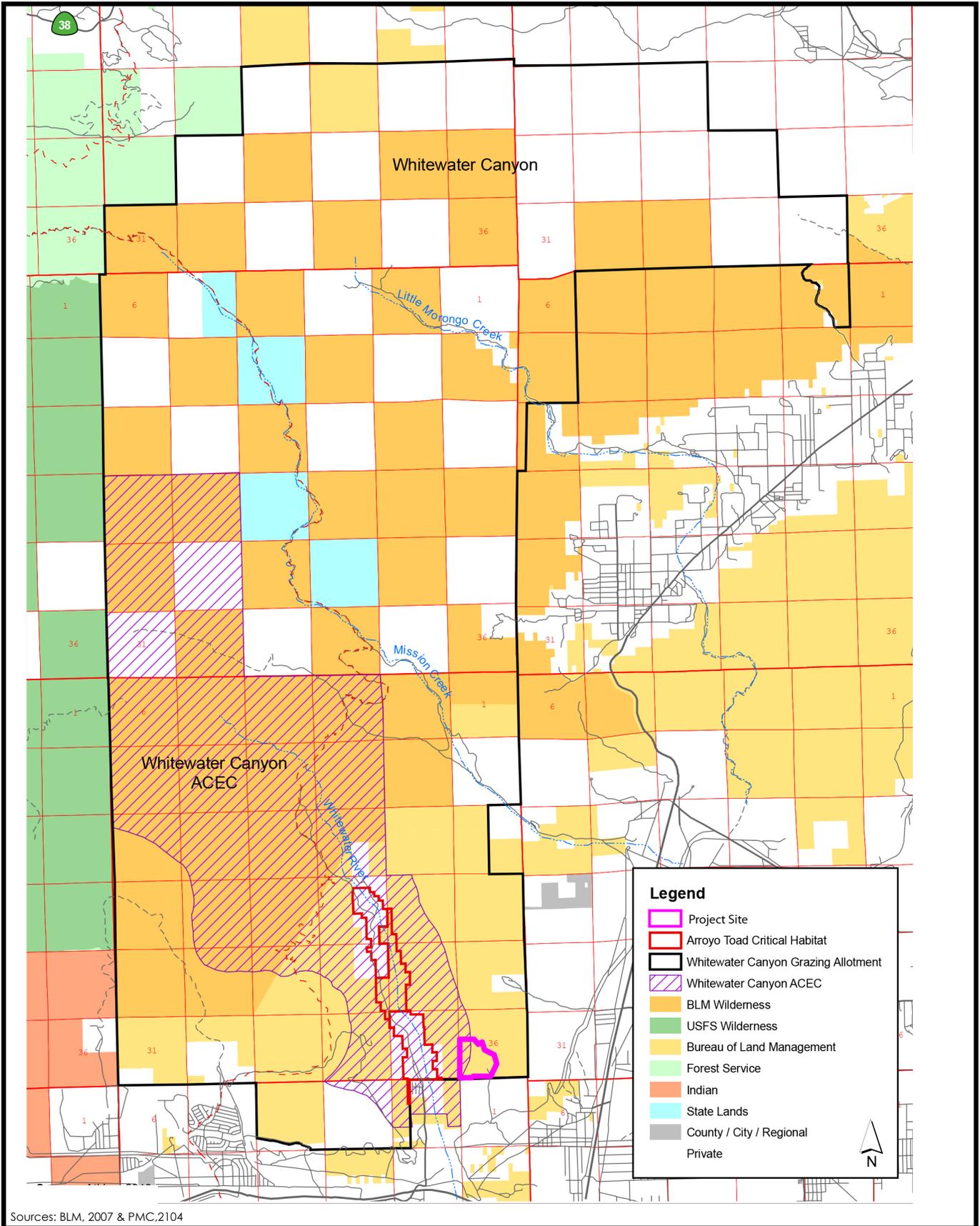


Figure 3-1
Whitewater Canyon Area of Critical
Environmental Concern (ACEC)

A list of sensitive vegetation (or plant species) that potentially occurs in the project area was compiled from the California Natural Diversity Database (CNDDDB) for the White Water, Desert Hot Springs, San Gorgonio Mountain, Catclaw Flat, Morongo Valley, Cabazon, Lake Fulmor, San Jacinto Peak, and Palm Springs U.S. Geographical Survey topographic quadrangles. Additional information was also gathered from the USFWS critical habitat portal, Calflora inventory, CVMSHCP documents, and Whitewater Canyon ACEC plan, which is part of the CDCA Plan. Sensitive vegetation and natural communities are discussed further in the following sections.

Sensitive Vegetation

Sensitive plant species are those that have been listed as a federal Candidate, Threatened, or Endangered species or listed as a state Rare, Threatened, or Endangered species. Under CEQA, the project lead agency and the CDFW (in making a determination of significance) must also treat non-listed plant species as equivalent to listed species if such species satisfy the minimum biological criteria for listing. In general, the CDFW considers plant species on the California Native Plant Society’s (CNPS) Inventory of Rare and Endangered Vascular Plants of California as qualifying for legal protection if the plant is designated as List 1A (Plants Presumed Extinct in California); List 1B (Plants Rare, Threatened, or Endangered in California and elsewhere); or List 2 (Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere). Other CNPS species designated as List 3 (Review List) or List 4 (Plants of Limited Distribution) may, but generally do not, qualify for protection under CEQA.

Based on a review of the data, special-status plant species with the potential to occur in the vicinity of the project area were identified and are listed in Table 3-5. General species account information and existing habitat conditions, which were recorded during field surveys in May 2013, were used to determine the likelihood of occurrence for each species within the project area. Further focused botanical surveys were conducted (in the project area) on May 31, 2013, to record the presence or absence of these species. The surveys followed the CDFW (2000) and CNPS (2001) published guidelines for special-status plants, and the results are included in Table 3-5.

Table 3-5: Special-Status Plant Species with the Potential to Occur in the Project Area⁽¹⁾

Common Name/ Scientific Name	Status (Federal/ State/ CNPS/BLM)⁽²⁾	Blooming or Survey Period	Habitats of Occurrence	Potential to Occur in Project Area	Presence/Absence on Project Site
Coachella Valley milk-vetch (<i>Astragalus lentiginosus</i> var. <i>coachellae</i>)	E/-/1B.2/-	February– May	Sonoran desert scrub; sandy flats, washes, outwash fans, and sometimes on dunes (60–360 meter elevation)	High	Presumed absent. Species not detected during appropriate bloom-period floristic survey.
triple-ribbed milk-vetch (<i>Astragalus tricarinatus</i>)	E/-/1B.2/-	February– May	Joshua tree woodland, Sonoran desert scrub; hot, rocky slopes in canyons and along edge of	High	Possible. Species not detected during appropriate bloom-period floristic survey.

Table 3-5: Special-Status Plant Species with the Potential to Occur in the Project Area⁽¹⁾

Common Name/ Scientific Name	Status (Federal/ State/ CNPS/BLM) ⁽²⁾	Blooming or Survey Period	Habitats of Occurrence	Potential to Occur in Project Area	Presence/Absence on Project Site
			boulder-strewn desert washes, with <i>Larrea</i> and <i>Encelia</i> species (450–790 meter elevation)		but known from previous records in the study area.
Mojave tarplant (<i>Deinandra mohavensis</i>)	-/E/1B.3/S	May– January	Riparian scrub, chaparral; low sand bars in river beds, mostly in riparian areas or in ephemeral grassy areas (850–1,600 meter elevation)	Moderate	Presumed absent. Species not detected during appropriate bloom-period floristic survey.
Little San Bernardino Mountains linanthus (<i>Linanthus maculatus</i>)	-/-/1B.2/S	March–May	Desert dunes, Sonoran desert scrub, Mojavean desert scrub, Joshua tree woodland; sandy places, usually in light-colored quartz sand often in wash or bajada (195–2,075 meter elevation)	Moderate	Presumed absent. Species not detected during appropriate bloom-period floristic survey.
California dandelion (<i>Taraxacum californicum</i>)	E/-/1B.1/-	May– August	Meadows and seeps; mesic meadows, usually free of taller vegetation (1,620–2,800 meter elevation)	Low	Presumed absent. Habitat is not present on-site.
Hidden Lake bluecurls (<i>Trichostema austromontanum</i> ssp. <i>compactum</i>)	T/-/1B.1/-	July– September	Upper montane coniferous forest; seasonally submerged lake margins, decomposed granite (only one known location) (2,400–2,680 meter elevation)	Low	Presumed absent. Habitat is not present on-site.

⁽¹⁾ Table includes species indentified in the U.S. Bureau of Land Management 2002 Coachella Valley Plan Amendment as having the potential to occur within the project area.

⁽²⁾ Order of Codes for Plants - Federal/State/CNPS/BLM

Federal: **E** - Federally listed as Endangered; **T** - Federally listed as Threatened

State: **E** - State listed as Endangered

CNPS: **1B** - CNPS considers the plant Rare, Threatened, or Endangered in California and elsewhere

.1 - Species seriously endangered in California

.2 - Species fairly endangered in California

.3 - Species not very endangered in California

BLM: **S** - Sensitive

No special-status plant species were observed during the general biological resource survey or the focused botanical survey at the project location. Furthermore, a recent fire and disturbance from associated mining activities have decreased the suitability of habitat on-site to support sensitive vegetation. However, one species, triple-ribbed milk-vetch (*Astragalus tricarinatus*), has been previously reported within the project area and is considered further.

Triple-Ribbed Milk-Vetch (*Astragalus tricarinatus*)

Triple-ribbed milk-vetch is a short-lived perennial plant of the Fabaceae family. Habitat for this species includes dry washes, bases of canyon slopes, and scree slopes. Triple-ribbed milk-vetch is distributed throughout the transition areas of the Sonoran and Mojave Deserts in Southern California. A Biological Assessment memorandum was prepared by the project proponent's biological resources consultant to assess the potential effects of the Proposed Action on triple-ribbed milk-vetch⁵⁴ and to provide supporting information for informal BLM consultation with USFWS.

As reported in the assessment memorandum, the May 2013 survey findings indicate that marginally suitable habitat for the triple-ribbed milk-vetch occurs in Super Creek Wash. One known location for the species was identified in previous surveys in an upland area immediately southwest of the existing quarry operations. The known location is within the proposed 33.4-acre expansion area and was included in the focused survey. The specimen was not observed; absence was attributed to disturbance associated with mining activities, low rainfall (drought), and/or natural life cycle as discussed below.

Records indicate that in 2005 a single plant was observed (location unknown); in 2009 the specimen reported in 2005 was not located but two plants were reported near an access road immediately south of the existing quarry. No interim records were available between 2009 and 2013. In 2013, focused plant surveys were conducted and the specimen was not located. Based on available literature, the known record for *Astragalus tricarinatus* within the Super Creek Quarry mine boundary appears to be a waif occurrence. Waifs are vulnerable to disturbance and loss from random natural events including flood, fire, and climate change, and are also susceptible to anthropogenic disturbance such as the ongoing mining operations.

The Biological Assessment memorandum noted the 5-Year Review prepared by the USFWS in 2009 for *Astragalus tricarinatus* stated the distribution of the species at the time of listing consisted of a few scattered individuals in several watersheds and the persistence of a short-lived species based on a few scattered individuals would seem unlikely. A more likely scenario is that it persisted because of source occurrences farther upstream. The presumably larger self-sustaining source occurrences could provide the seeds that result in isolated waif plants originally thought to be the only representatives of the species. As discussed in the 5-Year Review, historical records of individual plants typically fail to produce a specimen in subsequent surveys.

Longevity accounts for *Astragalus tricarinatus* describe it as a short-lived perennial that persists for about 3 to 5 years. The historical record of one to two plants at the Super Creek Quarry is not consistent with records of self-sustaining populations. Therefore, in addition to the anthropogenic disturbances and lack of rain identified in the focused plant study, lack of observation may be attributed to the species natural life cycle.⁵⁵

⁵⁴ Lilburn Corporation, Biological Assessment Memorandum Report for the Revised Plan of Operations and Amended Reclamation Plan for the Super Creek Quarry, March 2014.

⁵⁵ Lilburn Corporation, Biological Assessment Memo Report for the Revised Plan of Operations and Amended Reclamation Plan for the Super Creek Quarry, March 2014.

Sensitive Natural Communities, Including Wetlands

Sensitive natural communities (or habitats) were identified based on available resource agency data and on-site investigation.

Sensitive Habitats

Sensitive natural communities identified by the CVMSHCP as occurring within the Upper Mission Creek/Big Morongo Canyon Conservation Area (where the project is located) are Sonoran creosote bush scrub, Sonoran mixed woody and succulent scrub, Mojave mixed woody scrub, Sonoran cottonwood-willow riparian forest, southern sycamore-alder riparian woodland, desert dry wash woodland, and Mojavean pinyon-juniper woodland. Of these, one natural community (Sonoran creosote bush scrub) is identified by the CVMSHCP as occurring in the vicinity of the project area, but the project site is not included in the protected area boundary. None of these sensitive habitats were identified within the area proposed for disturbance during on-site surveys. Furthermore, the Proposed Action is not expected to substantially affect any sensitive habitats in the vicinity of the project area.

Jurisdictional Waters and Wetlands

In order to determine the type and extent of waterways within the project area, a preliminary jurisdictional delineation of all wetlands and waters of the U.S. was conducted in May 2013.⁵⁶ The technical findings of this survey confirmed the presence of five desert drainages that could be considered waters of the U.S., including Super Creek and four other ephemeral drainages. Super Creek is an ephemeral drainage dominated by upland brittlebush-white bursage vegetation along the banks and desert willow habitat within the bed. The other four ephemeral drainages are dominated by upland brittlebush-white bursage vegetation along the banks and beds. Each feature only receives water during rain events and all are tributaries of the Whitewater River. The delineation determined that approximately 0.72 acres of waters of the U.S. (in the form of drainages) would be impacted by the Proposed Action. No wetlands were identified within the project area.

Both Super Creek (situated north and east of the existing quarry) and the Whitewater River (located west of the Proposed Action) have a wildlife corridor function. The Proposed Action would primarily involve mining expansion on the west side of the existing limits of disturbance. To the north and east, a stormwater detention basin (north) and additional sediment basins (east) would also be installed upslope from Super Creek and separated from the creek by the access road berm. Therefore, potential effects of the Proposed Action on wildlife corridors associated with Super Creek are considered in the analysis. The Whitewater River would not be directly impacted by proposed activities, and no effects on wildlife corridors are expected.

3.1.8 Visual Resources

The Super Creek Quarry is located in the foothills of the southeastern reaches of the San Bernardino Range within an elevation range of approximately 2,000 feet to 2,450 feet above

⁵⁶ Lilburn Corporation, Jurisdictional Delineation for the Revised Plan of Operations and Amended Reclamation Plan for the Super Creek Quarry, August 2013.

mean sea level. The site is relatively isolated and immediately surrounded by steep, rugged mountainous ridges and valleys. The Whitewater River is approximately 0.5 mile west of the site, and several wind energy generators are south and east of the site. Vacant open space comprises the remainder of the immediate vicinity around the project site. The nearest residential development is approximately 1 mile to the southwest, along Whitewater Canyon Road.

Very sparse vegetation covers the slopes in the region, allowing the grey, green, and brown shades of the natural minerals to dominate local coloring. The exposed surface of the Super Creek Quarry site contrasts with the surrounding region as the vegetation is removed and the brownish/red/gold decorative rock is exposed.

In addition, the Southwest and Northwest Waste Placement Areas situated immediately below the area of excavation present a distinct visual contrast between the active quarry and surrounding terrain.⁵⁷ The waste placement areas appear as unbroken expanses of light tan/yellow color amid the grey, green, and brown shades of the surrounding terrain and the brown/red/gold of the quarry excavation. Despite being inactive since 2008, the waste treatment areas are relatively devoid of significant vegetation and are the most visually distinctive feature of the current quarry site from various distant viewpoints.

Due to the terrain and the relative isolation of the project site, the quarry area is only visible from certain viewpoints in the region. From these viewpoints, the overall view of the landscape consists primarily of flat tones of gray, green, and brown. Visually, diverse tan to brown forms characterize the foothills, with large dark gray forms comprising the larger mountain range to the north. Depending on the viewing angle, there is also a thin, light tan plane of the lower alluvial fan that lies at the base of the local foothills that contrasts moderately in color, form, and texture. Greater coverage of vegetation in the lower alluvial areas provides a coarser texture and injection of green coloring from the common creosote scrub community. Many man-made features are near the site to the south and east in the form of wind energy turbines, Interstate 10, and power lines, as well as some structures. Several wind farms comprise thousands of wind turbines that convert the wind into electricity and are clearly the dominant manmade visual feature in the vicinity.⁵⁸

3.1.9 Wastes, Hazardous or Solid

Hazardous Materials and Wastes

All rock products are naturally occurring rock. Chemicals or other hazardous materials are not used or produced during processing of materials at mine site.⁵⁹

Hazardous materials use at the site is limited to diesel fuel and oils/lubricants in heavy equipment used for removing rock (dozers, excavators, front-end loaders, and water truck) and in processing operations (portable crushing and screening equipment). Diesel fuel is used in the power generator for the crushing/screening plant in the quarry area. The fuel is stored in a 1,000-

⁵⁷ The description of the appearance of waste treatment areas is based on observations during a June 2013 site reconnaissance.

⁵⁸ Appendix E of the Plan of Operations, Visual Impact Analysis, prepared by Webber & Webber Mining Consultants, Inc., December 2004, included in Appendix A of this EA-IS/MND.

⁵⁹ Lilburn Corporation, Super Creek Quarry Expansion Revised BLM Plan of Operations and Amended Reclamation Plan No. 137 CA ID #91-33-0003, prepared for Painted Hills Mining Company, January 2013.

gallon aboveground storage tank (AST).⁶⁰ There are no underground fuel storage tanks. No hazardous waste is stored in the quarry area.⁶¹ Because of the quantity of fuel stored in the AST, Painted Hills is required to maintain a Hazardous Materials Business Plan (“Business Plan”) and hazardous materials inventory, which are submitted to the Hazardous Materials Management Division, the CUPA for Riverside County, which is responsible for regulating hazardous materials business plans and hazardous waste.⁶²

Owner/operators of ASTs are required by state law (Aboveground Petroleum Storage Act [Health and Safety Code Section 25270]) to have a SPCC, the main purpose of which is to ensure the potential for environmental contamination (e.g., soil or water) is minimized through leak detection and monitoring and having secondary containment in the event of a spill during tank refilling or leaks. Painted Hills maintains a SPCC, which includes employee training, record-keeping, preventive maintenance, and best management practices. If a hazardous materials release occurs at the quarry, employees are required to stop the source of the release, contain the materials, and cover the release with absorbent materials. Materials from a leak or spill must be cleaned up and disposed of in accordance with applicable hazardous waste regulations. Employees may clean up the release, or if the spill is too large, an outside licensed cleanup contractor must be used. Painted Hills is also responsible for contacting state and local regulatory agencies to report the release.⁶³

Ordinarily, heavy equipment maintenance is performed off-site in a designated equipment repair area at the Painted Hills retail site; however, minor repairs/maintenance may occur occasionally at the quarry area. Waste oil removed from heavy equipment in the off-site repair area, along with other hazardous waste generated during maintenance, is transported for off-site disposal by approved methods via properly trained and licensed personnel.

The California Public Resources Code 21092.6 requires disclosure whether a project would be located on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (“Cortese List”), and if it is included, whether it would create a significant hazard to the public or the environment. The project site is not included on the Cortese List.⁶⁴

Solid Wastes

Solid wastes are not generated at the existing quarry site. Waste rock from mining operations is stockpiled on-site, as described in Section 3.1.3 (Drainage, Erosion, and Sediment) and Section 3.1.4 (Geology, Soils, and Mineral Resources), above. There is no off-site transport of solid wastes from the quarry.

⁶⁰ Whiterock Rock & Supply Co., Business Emergency Plan, prepared by Webber & Webber Mining Consultants, Inc., December 17, 2002.

⁶¹ Lilburn Corporation, Super Creek Quarry Expansion Revised BLM Plan of Operations and Amended Reclamation Plan No. 137 CA ID #91-33-0003, prepared for Painted Hills Mining Company, January 2013, p.20.

⁶² Lilburn Corporation, Super Creek Quarry Expansion Revised BLM Plan of Operations and Amended Reclamation Plan No. 137 CA ID #91-33-0003, prepared for Painted Hills Mining Company, January 2013, p.20.

⁶³ Whiterock Rock & Supply Co., Business Emergency Plan, prepared by Webber & Webber Mining Consultants, Inc., December 17, 2002.

⁶⁴ California Department of Toxic Substances Control, EnviroStor database. <http://www.envirostor.dtsc.ca.gov/public/California> State Water Resources Control Board, GeoTracker database. <http://geotracker.waterboards.ca.gov/>

3.1.10 Wildlife

For the purposes of this assessment, sensitive biological resources include special-status species of wildlife that are:

- Listed and protected under the federal and/or California Endangered Species Acts;
- Listed and protected under other federal and/or state regulations;
- Sufficiently rare to qualify for listing or protection under federal and/or state regulations;
or
- Considered unique or in decline by the scientific community.

A list of sensitive wildlife that potentially occur in the project area was compiled from the CNDDDB for the White Water, Desert Hot Springs, San Geronio Mountain, Catclaw Flat, Morongo Valley, Cabazon, Lake Fulmor, San Jacinto Peak, and Palm Springs U.S. Geographical Survey topographic quadrangles. Additional information was also gathered from the USFWS critical habitat portal, CVMSHCP documents, and the Whitewater Canyon ACEC plan that is part of the CDCA plan. Based on a review of available data, special-status wildlife that have the potential to occur in the vicinity of the project and are under the protection of the federal Endangered Species Act (ESA) and California Endangered Species Act or that require special permits or consultation with regulatory agencies are presented in Table 3-6. General species account information and existing habitat conditions, which were recorded during field surveys in May 2013, were used to determine the likelihood of occurrence for each species within the project area.

Table 3-6: Special-Status Wildlife Species with the Potential to Occur in the Project Area⁽¹⁾

Common Name/ Scientific Name	Status (Federal/ State/ CDFW/BLM) ⁽²⁾	Habitats of Occurrence	Potential to Occur in Project Area	Presence/Absence on Project Site
INVERTEBRATES				
Casey's June beetle (<i>Dinacoma caseyi</i>)	PE/-/-/-	Found only in two populations in a small area of southern Palm Springs; found in sandy soils and alluvium with the females living underground and only coming to the ground surface to mate	Low	Unlikely. The Proposed Action would occur on steep terrain with no to very little alluvium.
Coachella Valley Jerusalem cricket (<i>Stenopelmatus cahuilensis</i>)	-/-/-/-	Inhabits a small segment of the sand and dune areas of the Coachella Valley, in the vicinity of Palm Springs; found in large, undulating dunes piled up at the north base of Mt. San Jacinto	Low	Presumed absent. Habitat is not present on-site.
AMPHIBIANS				
California tiger salamander (<i>Ambystoma californiense</i>)	T/T/SC/-	Central Valley Distinct Population Segment federally listed as threatened, Santa Barbara and Sonoma Counties Distinct Population Segments federally listed as endangered; need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding	Low	Presumed absent. Habitat is not present on-site.

Table 3-6: Special-Status Wildlife Species with the Potential to Occur in the Project Area⁽¹⁾

Common Name/ Scientific Name	Status (Federal/ State/ CDFW/BLM)⁽²⁾	Habitats of Occurrence	Potential to Occur in Project Area	Presence/Absence on Project Site
arroyo toad (<i>Anaxyrus californicus</i>)	E/-/SC/-	Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc.; rivers with sandy banks, willows (<i>Salix</i> sp.), cottonwoods (<i>Populus</i> sp.), and sycamores (<i>Platanus</i> sp.) as well as loose, gravelly areas of streams in drier parts of range	Low	Presumed absent. Habitat is not present on-site. The project site is not within the boundary of arroyo toad critical habitat (see Figure 3-1).
California red-legged frog (<i>Rana draytonii</i>)	T/-/SC/-	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation; requires 11–20 weeks of permanent water for larval development and must have access to estivation habitat	Low	Presumed absent. Habitat is not present on-site.
Sierra Madre yellow-legged frog (<i>Rana muscosa</i>)	E/E/SC/-	Federal listing refers to populations in the San Gabriel, San Jacinto, and San Bernardino Mountains only; always encountered within a few feet of water, tadpoles may require 2–4 years to complete their aquatic development	Low	Presumed absent. Habitat is not present on-site.
REPTILES				
southern rubber boa (<i>Charina umbratica</i>)	-/T/-/-	Restricted to the San Bernardino and San Jacinto mountains, found in a variety of montane forest habitats; found in vicinity of streams or wet meadows and requires loose, moist soil for burrowing, seeks cover in rotting logs	Low	Presumed absent. Habitat is not present on-site.
desert tortoise (<i>Gopherus agassizii</i>)	T/T/-/-	Most common in desert scrub, desert wash, and Joshua tree habitats, occurs in almost every desert habitat; require friable soil for burrow and nest construction, creosote bush habitat with large annual wildflower blooms preferred	High	Possible. Pre-project protocol surveys did not find any presence or sign of desert tortoise.
flat-tailed horned lizard (<i>Phrynosoma mcallii</i>)	-/-/SC/S	Restricted to desert washes and desert flats in central Riverside, eastern San Diego, and Imperial counties; critical habitat element is fine sand into which lizards burrow to avoid temperature extremes, requires vegetative cover	Moderate	Unlikely. Super Creek and other washes provide marginal sandy habitat.
Coachella Valley fringe-toed lizard (<i>Uma inornata</i>)	T/E/-/-	Limited to sandy areas in the Coachella Valley, Riverside County; requires fine, loose, windblown sand (for burrowing), interspersed with hardpan and widely spaced desert shrubs	Low	Presumed absent. Habitat is not present on-site.

Table 3-6: Special-Status Wildlife Species with the Potential to Occur in the Project Area⁽¹⁾

Common Name/ Scientific Name	Status (Federal/ State/ CDFW/BLM) ⁽²⁾	Habitats of Occurrence	Potential to Occur in Project Area	Presence/Absence on Project Site
BIRDS				
burrowing owl (<i>Athene cunicularia</i>)	-/-/SC/S	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation; subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel (<i>Otospermophilus beecheyi</i>)	Moderate	Possible. Although some areas could support this species, steep, rocky terrain is not suitable habitat.
yellow warbler (<i>Dendroica petechia brewsteri</i>)	-/-/SC/-	Riparian plant associations, prefers willows (<i>Salix</i> sp.), cottonwoods (<i>Populus</i> sp.), aspens (<i>Populus</i> sp.), sycamores (<i>Platanus</i> sp.), and alders (<i>Alnus</i> sp.) for nesting and foraging; also nests in montane shrubbery in open conifer forests	Low	Presumed absent. Habitat is not present on-site.
southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	E/E/-/-	Riparian woodlands in Southern California	Low	Presumed absent. Habitat is not present on-site.
yellow-breasted chat (<i>Icteria virens</i>)	-/-/SC/-	Summer resident inhabiting riparian thickets of willow (<i>Salix</i> sp.) and other brushy tangles near watercourses; nests in low, dense riparian, consisting of willow, blackberry (<i>Rubus</i> sp.), wild grape (<i>Vitis</i> sp.) and forages and nests within 10 feet of the ground	Low	Presumed absent. Habitat is not present on-site.
summer tanager (<i>Piranga rubra</i>)	-/-/SC/-	Summer resident of desert riparian along lower Colorado River, and locally elsewhere in California deserts; requires cottonwood-willow riparian for nesting and foraging and prefers older, dense stands along streams	Low	Presumed absent. Habitat is not present on-site.
Le Conte's thrasher (<i>Toxostoma lecontei</i>)	-/-/SC/S* *(ssp. <i>macmillanorum</i> only)	Desert resident primarily of open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats; commonly nests in a dense, spiny shrub or densely branched cactus (various species) in desert wash habitat, usually 2–8 feet above ground	Moderate	Possible.
least Bell's vireo (<i>Vireo belli pusillus</i>)	E/E/-/-	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms below 2,000 feet elevation; nests placed along margins of bushes or on twigs projecting into pathways, usually willow (<i>Salix</i> sp.), <i>Baccharis</i> sp., and mesquite (<i>Prosopis</i> sp.)	Low	Presumed absent. Habitat is not present on-site.

Table 3-6: Special-Status Wildlife Species with the Potential to Occur in the Project Area⁽¹⁾

Common Name/ Scientific Name	Status (Federal/ State/ CDFW/BLM) ⁽²⁾	Habitats of Occurrence	Potential to Occur in Project Area	Presence/Absence on Project Site
gray vireo (<i>Vireo vicinior</i>)	-/-SC/S	Dry chaparral west of desert in chamise-dominated habitat, mountains of Mojave desert associated with <i>Juniperus</i> sp.; forage, nest, and sing in areas formed by a continuous growth of twigs, 1–5 feet above ground	Low	Presumed absent. Habitat is not present on-site.
MAMMALS				
San Bernardino kangaroo rat (<i>Dipodomys merriami parvus</i>)	E/-/SC/-	Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains; needs early to intermediate seral (plant community successional) stages	Low	Unlikely. The project area lacks favorable vegetation.
peninsular bighorn sheep [Distinct Population Segment] (<i>Ovis canadensis nelsoni</i>)	E/T/-/-	Open desert slopes below 4,000 feet elevation from San Gorgonio Pass south into Mexico; optimal habitat includes steep walled canyons and ridges bisected by rocky or sandy washes with available water	Moderate	Presumed absent. No known records of occurrence north of I-10.
Palm Springs pocket mouse (<i>Perognathus longimembris bangsi</i>)	-/-SC/S	Desert riparian, desert scrub, desert wash and sagebrush habitats most common in creosote-dominated desert scrub; rarely found on rocky sites, occurs in all canopy coverage classes	Low	Presumed absent. Habitat is not present on-site.
Palm Springs (Coachella Valley) round-tailed ground squirrel (<i>Xerospermophilus tereticaudus chlorus</i>)	-/-SC/-	Restricted to the Coachella Valley, prefers desert succulent scrub, desert wash, desert scrub, alkali scrub, and levees; prefers open, flat, grassy areas in fine-textured, sandy soil and density is correlated with winter rainfall	Low	Presumed absent. Habitat is not present on-site.
<p>⁽¹⁾ Table includes species identified in the U.S. Bureau of Land Management 2002 Coachella Valley Plan Amendment as having the potential to occur within the project area.</p> <p>⁽²⁾ Order of Codes for Animals - Federal/State/CDFW</p> <p>Federal: E - Federally listed as Endangered; PE - Federally listed as Potentially Endangered; T - Federally listed as Threatened</p> <p>State: E - State listed as Endangered; T - State listed as Threatened</p> <p>CDFW: SC - California Species of Special Concern</p> <p>BLM: S - Sensitive</p>				

After consideration of existing conditions within the project area, three sensitive wildlife species are possible on-site and therefore could be impacted by the Proposed Action. The three species, desert tortoise (*Gopherus agassizii*), burrowing owl (*Athene cunicularia*), and Le Conte's thrasher (*Toxostoma lecontei*), are described below.

Desert Tortoise (*Gopherus agassizii*)

The desert tortoise is a federal and state listed threatened species. The tortoise occupies a variety of habitats ranging from flats and slopes characterized by creosote bush scrub and white bursage dominated series at lower elevations to rocky slopes in blackbrush scrub and juniper woodland at higher elevations. Throughout most of the Mojave Desert, tortoises occur most commonly on gently sloping terrain with sandy-gravel soil and where there is sparse cover of low-growing shrubs, which allows establishment of herbaceous plants. Desert tortoise require soil friable enough for digging burrows, but firm enough so that burrows do not collapse.

The Super Creek drainage on the east side of the project site has habitat suitable for desert tortoise. In order to identify the presence of the species and potential impacts, protocol presence/absence surveys for desert tortoise were conducted on May 30, 2013.⁶⁵ The surveys were conducted in accordance with the USFWS (2010) Pre-Project Field Survey Protocol for Potential Desert Tortoise Habitats. No desert tortoise or sign of the species was observed to occur in the project area or in the influence area up to 600 meters elevation (approximately 1,960 feet) where the terrain was accessible. However, because of the suitability of the habitat on-site for desert tortoise, it is possible this species occurs within the project area.

Burrowing Owl (*Athene cunicularia*)

Burrowing owl is a California species of special concern. This species prefers habitat with short, sparse vegetation, and few shrubs on level to gentle topography with well-drained soils. The species requires underground burrows or other cavities for nesting, roosting, and cover. In California, burrowing owls frequently occupy ground squirrel and round-tailed squirrel burrows. This species may also occupy natural rock cavities, debris piles, culverts, and pipes.

Habitat within the expansion area may be too steep and rocky for burrowing owl occurrence. However, habitat does exist in the nearby Super Creek Wash. Therefore, it is possible this species occurs within the project area.

Le Conte's Thrasher (*Toxostoma lecontei*)

Le Conte's thrasher is a California species of special concern and a CVMSHCP covered species. Typical habitat for Le Conte's thrasher consists of sparsely vegetated desert flats, dunes, alluvial fans, or gently rolling hills having a high proportion of one or more species of saltbush (*Atriplex* sp.) and/or cylindrical cholla cactus (*Opuntia* sp.). For nesting, this bird prefers thick, dense, and thorny shrubs or cholla cactus.

Habitat within the project area provides moderate suitability for occurrence of this species. Therefore, it is possible Le Conte's thrasher is present within the project area.

⁶⁵ Lilburn Corporation, Desert Tortoise Presence/Absence Pre-Project Survey for the Revised Plan of Operations for the Super Creek Quarry, August 2013.

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4 ENVIRONMENTAL CONSEQUENCES

4.1 Proposed Action

The following analysis addresses the potential environmental consequences of the Proposed Action on key environmental issue areas identified in Section 3.1 of this EA-IS/MND. The direct and indirect effects of the Proposed Action on resources present and brought forward for analysis are described in this section. Direct effects are caused by the action and occur at the same time and place. Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. The effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems (40 CFR 1508.8).

Pursuant to NEPA regulations (40 CFR 1500–1508), project effects are evaluated based on the criteria of context and intensity. Context means the affected environment in which a project occurs. Intensity means the degree or magnitude of a potential adverse effect where the effect is thus determined to be negligible, moderate, or substantial.

4.1.1 Air Quality and Climate Change/Greenhouse Gases

Impact Analysis Methodology

Rock crushing, processing, and screening as well as hauling on dirt access roads within the project area have the potential to create fugitive dust and vehicle emissions. CalEEMod was used to quantify operational emissions for criteria air pollutants and greenhouse gas (GHG) emissions. The USEPA's AP 42 Section 13.2.2 Unpaved Roads was used to calculate fugitive emissions from haul truck traffic. Model output is included in Appendix B of this EA-IS/MND.

The analysis assumes in order to comply with the PM₁₀ State Implementation Plan and SCAQMD regulations, the site's processing and power equipment are and would continue to be operated under a permit to operate from the SCAQMD. Operations and permits are inspected and renewed annually. Haul trucks and diesel equipment must meet requirements of CARB's off-road diesel vehicles regulations to reduce diesel pollutants. Operations are required to comply with SCAQMD Rules 401 (limiting visible emissions from exhaust), 402 (avoid nuisance emissions), and 403 (overall fugitive dust control requirements). Water would be used on-site only for dust suppression activities. These include water spraying roads, active stockpiles, screening plant, and active mining areas. Reclamation of surface disturbance would gradually eliminate any potential for long-term effects on air resources.

Federal Guidance for Determining Effects

A federal conformity determination is required for the pollutants for which a basin in nonattainment or maintenance. The South Coast Air Basin (Basin) is in nonattainment for ozone, PM₁₀, and PM_{2.5} and a maintenance area for NO_x. Volatile organic compounds (VOCs) and NO_x are ozone precursors. A project that would exceed the de minimis thresholds for NO_x or VOCs

(100 tons per year⁶⁶) would be considered to have a significant effect related to ozone. A federal conformity analysis was performed on PM₁₀, PM_{2.5}, VOCs, and NO_x emissions for the Proposed Action. The results of this analysis are included in Appendix B.

No federal significance criteria for GHG emissions have been established; however, the Council on Environmental Quality (CEQ) has established a guidance of 25,000 metric tons of carbon dioxide equivalent (MTCO_{2e}) as the minimum level of GHG emissions that warrants description in a NEPA environmental analysis for consideration by decision makers and the public.

CEQA Guidance for Determining Air Quality and Greenhouse Gas Emissions Impact Significance

According to CEQA Guidelines Appendix G, the Proposed Action will have a significant air quality impact if it would violate any air quality standard or contribute substantially to an existing or projected air quality violation; result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment; expose sensitive receptors to substantial pollutant concentrations; or create objectionable odors affecting a substantial number of people.

Based on Appendix G of the CEQA Guidelines, the Proposed Action will have a significant greenhouse gas emissions impact if it would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Proposed Action Effects

Criteria Air Pollutant Emissions

The proposed expansion of the Super Creek Quarry would increase the footprint of the quarry, but it would not change its operational and mining processes. As a result, the expansion of the Super Creek Quarry would not conflict with or obstruct implementation of the applicable AQMD plan. The Proposed Action could only violate air quality standards only if additional sources or increased concentrations of pollutants are introduced as a result of the Proposed Action. Because the Proposed Action would not generate any additional sources of pollutants and the daily emission levels would be the same as existing quarry operations, there would be no effect.

The Proposed Action would produce a maximum of 2 tons per year (tpy) of PM₁₀, 1 tpy of PM_{2.5}, 2 tpy of VOCs, and 14 tpy of NO_x emissions, after incorporating the reductions in pollutants due to dust control measures such as watering of access roads and the screen plant (see Appendix B). These emissions are below the federal standards for the specified pollutants and consistent with existing quarry operations. Because there would be no new annual emissions associated with the Proposed Action, no further conformity or determination analysis is required. In addition to the operation's and equipment's compliance with the SCAQMD and CARB, the on-site diesel generator that provides electrical service for the existing crushing/screening plant is permitted with the SCAQMD (PTO #D30726). Air quality effects would be negligible.

⁶⁶ 40 CFR Part 93.153(b)(2)

The Proposed Action would not result in a daily or annual increase in emissions. Additionally, due to the remote location of the Proposed Action, there are no sensitive receptors closer than 0.5 mile from the site. The Super Creek Quarry is located approximately 2 miles north of I-10, east of the Whitewater River in the far western portion of the City of Desert Hot Springs in Riverside County. Further, while the footprint of the disturbance area would increase compared to existing conditions, the daily traffic into and out of the site would not change. Therefore, the Proposed Action would not expose sensitive receptors in the area to substantial pollutant concentrations and there would be no adverse effect on sensitive receptors.

Lastly, the Proposed Action would not create objectionable odors. The expansion plan proposes to continue mining a type of decorative rock at the quarry expansion area site. The mining operations and equipment at the site would remain the same as the existing operations, and they would not result in any new odor sources. There would be no adverse effect.

Greenhouse Gas Emissions

Results of the CalEEMod GHG model indicate that the Proposed Action would emit the same amount of annual GHGs as the existing mining operations. It is estimated that the existing activities and Proposed Action would have a maximum annual GHG emission of 1,792 MTO₂e. The net change in GHG emissions from implementation of the Proposed Action would be 0 MTCO₂e annually. Both the current and future annual emissions of 1,792 MTCO₂e are below the 25,000 MTCO₂e guidance that the Council on Environmental Quality (CEQ) has established.

The proposed expansion of the Super Creek Quarry would not result in an annual increase in GHG emissions. Proposed daily and annual mining operations would not be different from the existing operations; therefore, there would not be any additional sources of GHG emissions as a result of the proposed quarry expansion. Additionally, the SCAQMD has adopted a numerical GHG significance threshold of 10,000 MTCO₂e/year for industrial processes. CalEEMod model results for the Proposed Action show that the Proposed Action (as well as the existing activities) would emit a maximum of 1,792 MTCO₂e/year and would be substantially below the SCAQMD's threshold for industrial processes. Because the Proposed Action would not result in an annual increase in GHG emissions and emissions would fall below the significance threshold for GHG emissions, the Proposed Action would result in negligible adverse effects.

The Scoping Plan prepared in accordance with Assembly Bill (AB) 32 (Section 38561 of the California Health and Safety Code) is currently the applicable plan adopted for the purpose of reducing GHG emissions. The Scoping Plan is the statewide plan for the reduction of GHG emissions. The Proposed Action would not increase annual GHG emissions and would be below the SCAQMD's screening threshold set for industrial projects in order for the region to meet the goals of AB 32. Therefore, the Proposed Action would not conflict with AB 32.

4.1.2 Cultural Resources

The results of the NAHC SLF search and the Native American information scoping process indicate that no specific resources are located in the project area, but that the project area and adjacent environs are considered highly sensitive for Native American resources. Several Tribal representatives recommended monitoring to mitigate potential impacts to Native American resources.

The literature reviews, EIC records searches, and intensive pedestrian surveys conducted by CRM TECH in 2004, 2006, and 2013 indicated that no known cultural resources are located within the Super Creek Quarry expansion disturbance limits. In addition, the closest known and recorded cultural resources are not located adjacent to the project area and would not be impacted by the undertaking. Thus, the current undertaking would have no effect on historic properties.

No adverse effects are anticipated to cultural resources as a result of the Proposed Action with implementation of environmental protection measures CR-1, CR-2, CR-3, and CR-4 presented in Section 2.1.16 of this EA-IS/MND. Measures CR-1 and CR-2 require completion of a site visit by a Native American representative and consultation and that a Native American monitor be present during initial ground-disturbing activities authorized by this project. Monitoring may be reduced or potentially eliminated if the Native American monitor determines that the potential for impacts has been eliminated. Measures CR-3 and CR-4 identify actions that must be implemented if previously unidentified cultural resources or human remains are discovered during mining or reclamation.

4.1.3 Drainage, Erosion, and Sediment

Impact Analysis Methodology

The analysis of drainage, erosion, and sediment impacts is qualitative and is based on information presented in the Plan of Operations/Amended Reclamation Plan. The plan describes how the Proposed Action would modify the existing topography/geologic conditions at the site and measures that are included in the project to mitigate potential hydrologic impacts (e.g., changes in drainage patterns) that would, in turn, reduce the potential for water quality impacts as a result of erosion and sedimentation.

The Proposed Action is not anticipated to result in on- or off-site flooding effects that would expose people or property to risk of damage because it is not expected to result in any net increase in surface runoff flows to Super Creek or the Whitewater River, and the site is not in a flood hazard zone. Therefore, flooding impacts are not further evaluated.

There are no groundwater wells at the project site. Water used at the quarry for dust control is obtained from an off-site well located at Painted Hills' retail facility. The Proposed Action would not require new or additional groundwater wells or groundwater withdrawals for mining or reclamation. The site is not within a groundwater recharge area; however, drainage west of the project area drains to the Whitewater River, which is a groundwater recharge area. The proposed expansion of mining operations and reclamation would not affect flows to the Whitewater River and therefore would have no effect on groundwater recharge. Therefore, there would be no effect on groundwater resources, and this issue does not require further evaluation.

Federal Guidance for Determining Effects

The context for evaluating drainage, erosion, and sediment impacts comprises the existing quarry operations and the extent to which historic and current mining and reclamation activities have modified site topography and drainage patterns, along with the proposed mining expansion area, as well off-site surface water features (Super Creek and Whitewater River) that may receive stormwater runoff from the site.

The Proposed Action was evaluated to determine whether it would result in substantial degradation of water quality or result in substantial erosion, scour, siltation, or alteration of existing drainages in a manner that could substantially and negatively affect listed and/or sensitive species or habitat.

CEQA Guidance for Determining Impact Significance

According to CEQA Guidelines Appendix G, the Proposed Action will have a significant hydrology and water quality impact if it would violate water quality standards or waste discharge requirements; substantially alter drainage patterns that would result in substantial erosion or siltation or cause flooding; or provide substantial additional sources of polluted runoff or otherwise degrade water quality.

Proposed Action Effects

The Proposed Action would add approximately 33.4 acres of additional quarry, including the two small hilltops just west of the existing quarry operation, waste placement areas, and sediment basins for a total active mining area of 57.2 acres. Approximately 21 acres along the western and southern boundaries of the site would remain undisturbed.

Similar to current operations, expansion of mining activities has the potential to alter drainage patterns on the site, result in erosion, and generate fine materials/sediment that could be carried to Super Creek, which could affect water quality in this intermittent stream. Under the Proposed Action, mining would occur in a manner that would provide for retention of any waters that may occur on-site within the excavation area, similar to existing conditions. As mining continues, a central depression would be maintained to allow any on-site water flows to deposit sediments within the confines of the expansion area. This enclosed depression area would be maintained until the quarry is mined to its final depth. Berming along the perimeter of the quarry expansion area would be used to supplement the retention of water flows on-site. No ponds or reservoirs are proposed. Dams or embankments are not proposed for any excavation or processing activity during mining, except for a small riprap dam for a detention basin in the Southwest Waste Placement Area (see below), which would be left in place.

The Proposed Action has been designed to prevent erosion and/or sedimentation of adjacent properties (including Super Creek and the Whitewater River) due to waters discharged from, or entering, the project site. Velocity control devices would break up the area into small micro-drainages, allowing use of smaller control structures, greater infiltration rates, lowered erosion rates, and thus smaller sediment loads. Erosion control measures (e.g., cross ditches, berms, waterbars, and straw wattles) would be implemented where necessary to achieve this complete retention. Figures 2-4 through 2-8 show the locations of erosion control features. The drainage

and erosion control features would be maintained and inspected periodically to ensure they are operating as expected.

As with current operations, the quarry expansion would comply with NDPEs Industrial Permit requirements for BMPs and a SWPPP. Throughout the life of the project, Painted Hills would continue to submit annual Mining Operation Reports to the OMR, the SMGB, and the BLM, as required by amendments to SMARA. The annual monitoring reports would assess existing conditions on-site including slope erosion and drainage controls, and would provide recommendations to improve and/or remediate any deficiencies in these areas.

The Proposed Action includes specific drainage, erosion, and sediment control features that are incorporated into the design of each element of the proposed quarry expansion including the East Tailings Slopes, West Slopes, Northwest Waste Placement Area, Southwest Waste Placement Area, north, west-central, and existing quarry areas, and stockpile areas. These features have been designed to minimize potential effects on drainage patterns, erosion, sedimentation, and off-site water quality in Super Creek and the Whitewater River.

In addition, implementation of the Plan of Operations/Amended Reclamation Plan reclamation activities would include regrading as necessary to achieve planned slopes, implementing and maintaining erosion control features, roughening the compacted surface to hold moisture, adding any stockpiled surface material containing banked seeds and available silts, seeding with native seeds, and staking or flagging reclaimed areas to eliminate additional disturbance. Reclamation activities would be implemented concurrently with the planned excavations. All quarry areas would incorporate grading that gently slopes to a central depression area for drainage collection. The small detention basin with riprap dam in the southwest area would be left in place. The permanent perimeter quarry area in the upper northwest areas would be reclaimed as completed to meet designed slopes and revegetated concurrent with ongoing mining. Revegetation would be ongoing during the quarry mining operation once the final slopes and quarry floors have been established. Reclamation and revegetation would be undertaken within two years of the cessation of all excavation activities. However, final reclamation would be contingent on meeting the revegetation success criteria and may continue longer than five years.

With the implementation of the proposed drainage and erosion/sediment control features described above, compliance with the Industrial Permit and SWPPP, and routine monitoring/inspection, the Proposed Action would result in negligible adverse direct and indirect effects on drainage, erosion/sedimentation, and water quality during mining and reclamation. In addition, as stated in Section 4.1.7, above, potential direct effects on on-site federally protected waters of the U.S. would be mitigated through compliance with USACE permitting requirements (environmental protection measure MM-BIO-5).

4.1.4 Geology, Soils, Mineral Resources, and Paleontology

Impact Analysis Methodology

The analysis of geology and soils impacts is based on information presented in the Plan of Operations/Amended Reclamation Plan and supporting geotechnical studies, which are referenced herein. As part of preparation of the Plan of Operations/Amended Reclamation Plan (mining and reclamation), the stability of the tailings slopes were evaluated in 2007, 2008, 2009,

2010, and 2012. The investigations consisted of field observations and testing and laboratory analysis combined with the use of computer models to predict the potential for landslides or slope failures.⁶⁷ The mine operator has worked closely with SMGB staff to determine appropriate methods to evaluate slope stability at the site. The most current (2012) study, which supplemented previous studies, was prepared in response to specific SMGB staff comments on conclusions of the previous studies concerning the stability of waste/tailings slopes. The analysis assumes SMGB staff concurrence with the 2012 report findings and consistency with SMARA requirements, which are the basis for the slope stability component described in the Plan of Operations/Amended Reclamation Plan.

Information pertaining to mineral resources is based on the Plan of Operations/Amended Reclamation Plan and mineral land classification data compiled by the California Geological Survey. The assessment of paleontologic resources impacts is based on a review of the geology of the project site and vicinity, published literature, and information provided by BLM Palm Springs-South Coast Field Office staff.

Federal Guidance for Determining Effects

The context for evaluating geology, soils, and mineral resources impacts comprises the existing quarry operations and the extent to which historic and current mining and reclamation activities have modified project site slopes, along with the proposed mining expansion area, as well off-site surface water (Super Creek) that is downslope of the East Tailings Slopes.

The Proposed Action was evaluated to determine whether it would expose people or property to hazards involving seismic hazards, including seismic-induced slope failure; result in landslides or slope failure due to slope instability related to mining or reclamation activities; or substantially alter the topography or ground surface relief beyond that resulting from natural processes, such as erosion.

No faults cross the site, and the site is not within a California-designated earthquake fault zone requiring special investigation. Therefore, analysis of potential surface fault rupture effects is not necessary. Potential erosion effects are evaluated in detail in Section 4.1.3, Drainage, Erosion, and Sediment, above.

CEQA Guidance for Determining Impact Significance

According to CEQA Guidelines Appendix G, the Proposed Action will have a significant geology, soils, or mineral resources impact if it would expose people to substantial adverse effects involving strong seismic ground shaking, seismic-related ground failure (including liquefaction) and landslides, or if it would be located on a geologic unit or soil that is unstable or would become unstable as a result of the project. Impacts on paleontological resources would be significant if the Proposed Action would directly or indirectly destroy a unique paleontologic resource.

⁶⁷ As used in the investigations, the term “landslide” refers to deep-seated slope failures with a rupture surface at least 25 feet deep. Landslides are typically related to the underlying structure of the parent material. Surficial failures refer to shallow failures that affect the upper geologic material.

While loss of topsoil is a potential project impact that the CEQA Guidelines suggest should be addressed, there is little topsoil at the project site. This impact does not require further evaluation. Erosion impacts are evaluated in detail in Section 4.1.3, Drainage, Erosion, and Sediment.

The State CEQA Guidelines (Appendix G) also recommend consideration of whether a project would 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, or if it would 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. With regard to the Proposed Action, there would be no impact requiring detailed evaluation. Although the quarry is a local source of a specialty decorative stone used locally, and the SMGB has classified the mine area as MRZ-2, it is not considered regionally significant and is not identified by the City of Desert Hot Springs as a locally important mineral resource recovery site.

Proposed Action Effects

Seismic Hazards

Due to the proximity of the site to the San Andreas fault zone and local active faults, severe seismic shaking can be expected to occur during the lifetime of the Proposed Action. However, there are currently no occupied structures that could be exposed to ground shaking, and none are proposed as part of mining or reclamation. All proposed quarry excavations would be in bedrock. Quarry slopes (no benching is proposed) would be excavated to no steeper than 1.2H:1V around the pit. The slope stability investigation for the Proposed Action concluded the slopes would have a seismic safety factor of over 2.⁶⁸ This indicates the quarry slopes would be stable during a seismic event. Because the site is underlain by bedrock at shallow depths, the potential for liquefaction is nonexistent.⁶⁹ For these reasons, the potential seismic hazard effect of the Proposed Action is negligible.

Slope Stability

The Proposed Action would develop five main features: northwest hilltop quarry, west-central hilltop quarry, southeastern pit area, Northwest Waste Placement Area, and Southwest Waste Placement Area. The following describes potential slope stability effects for those areas.

Northwest Hilltop, West-Central, and Southeastern Pit Quarry Areas. The new quarry areas would be mined to a maximum depth of approximately 130 feet in the hilltop area and approximately 150 feet in the pit area. The excavations would remove the top portion of two small hills just west, but contiguous to, the existing quarry operations. The northwestern hill would be mined from approximately 2,350 feet amsl to a quarry elevation of 2,250 feet amsl. The west-central hill would be mined from approximately 2,480 feet amsl to a quarry floor of approximately 6 acres at an elevation of 2,350 feet amsl. From this quarry elevation, slopes

⁶⁸ CHJ Consultants, Slope Stability Investigation, Existing Tailings Slopes and Proposed Expansion Slopes of Super Creek Quarry, Whitewater River Area, Riverside County, California, prepared for Whitewater Rock & Supply Company, February 15, 2011, p.19.

⁶⁹ CHJ Consultants, Supplemental Slope Stability Investigation, Existing Tailings Slopes and Proposed Expansion Slopes of Super Creek Quarry, Whitewater River Area, Riverside County, California, prepared for Painted Hills Mining Company, May 31, 2012.

would be cut at 3H:1V, gradually steepening to 1.2H:1V to form an irregular-shaped pit floor of approximately 1 acre at 2,125 feet amsl in the southeastern portion of the site. The mining cut slopes would be entirely in bedrock with a static factor of safety of over 3 and a seismic factor of safety of over 2.⁷⁰ This indicates the cut slopes in the quarry would be stable. All quarry slopes would be reclaimed to produce stable slopes, reducing the possibility of landslides, earth flows, or rock falls. Therefore, potential effects of the quarrying activities would result in negligible adverse effects relative to slope stability.

Northwest and Southwest Waste Placement Areas. Loose, unconsolidated materials placed in the proposed waste placement areas have the potential for becoming unstable unless measures are in place to stabilize them. Both waste placement areas would be developed with 2H:1V slopes with 10-foot-wide benches at 25-foot vertical intervals. The slopes would be protected with water bars and straw wattles, with water directed to rock-lined down drains. At the Southwest Waste Placement Area, the lower drainage would be detained by a proposed riprap dam. No water would be allowed to flow over the waste slopes.

The slope stability investigation for the proposed waste placement areas concluded the slopes would be stable if designed as described above and provided all loose alluvial materials are removed below the proposed slopes, and fill material placed and spread evenly in lifts, using conventional heavy equipment. The moisture content should be at least 7 percent by weight, or as determined by laboratory testing. Water would be added during the placement process to facilitate compaction of the tailings. Upon final grading completion, the slopes would be revegetated per the revegetation plan.

Based on the results of the slope stability investigations, which assume the design features described above, the new waste placement area slopes would not pose a substantial hazard related to slope stability. Therefore, potential adverse effects would be negligible.

Reclamation

Quarry Expansion and New Waste Placement Areas. Reclamation procedures would include regrading as necessary to achieve planned slopes, implementing and maintaining erosion control features, roughening the compacted surface to hold moisture, adding any stockpiled surface material containing banked seeds and available silts, seeding with native seeds, and staking or flagging reclaimed areas to eliminate additional disturbance. Reclamation activities would be accomplished concurrently with the planned excavations.

Annual slope stability monitoring would be performed by a registered professional engineer or geologist, who would observe the heights and inclinations of all on-site slopes with respect to the mining and reclamation plan requirements. This observation would include an assessment of whether the slopes are within the permitted boundaries. Evidence for instability observed, such as tension cracks, deep-seated failures, shallow failures (including soil-slip type failures and rockfalls/toppling), and areas of significant erosion, would be noted. Recommendations for mitigation of significant slope failure concerns would be included. Such measures could include removal of overburden, buttressing, slope flattening, slope removal, manual or equipment-based

⁷⁰ CHJ Consultants, Slope Stability Investigation, Existing Tailings Slopes and Proposed Expansion Slopes of Super Creek Quarry, Whitewater River Area, Riverside County, California, prepared for Whitewater Rock & Supply Company, February 15, 2011, p.19.

scaling of loose boulders, and minor regrading to redirect surface water flows. If a potential hazard to people or equipment is observed, recommendations for protection of people and equipment would be provided. A report would be prepared that documents the site observations, potential slope stability concerns, and recommended mitigation, if any, and included in the overall annual report.

With implementation of the proposed reclamation measures, the Proposed Action would result in negligible adverse effects in the proposed quarry expansion and new waste placement areas.

East Tailings Slopes. Active deposition of waste onto the East Tailings Slopes ceased in March 2008. Reclamation of these slopes to reduce and limit erosion of the fine materials is ongoing. Actions undertaken during 2012, which would be monitored, maintained, and remediated as necessary in the future to limit erosion on the slopes, included construction and maintenance of sediment basins at the toe of the slope, placement of riprap at toe of slope, reduction of the top of slopes by material removal, erosion control cross terracing, and revegetation. The most current study (2012) concluded the slopes are stable for purposes of reclamation. No additional measures with respect to deep-seated slope stability were determined to be necessary for reclamation of the existing slopes, as no evidence of deep-seated instability, such as tension cracks, scarps, or slumping, have been observed.⁷¹ In addition, there is a very low potential for impacts on Super Creek in the event that a seismically induced landslide occurs in the existing tailings slopes in the future.⁷²

However, to confirm assumptions with regard to strength parameters used in the slope stability calculations for the Eastern Tailings Slopes, additional testing of tailings slope materials would be conducted prior to establishment of final slope locations. Specifically, additional tailings material sampling and strength testing would be conducted by a qualified professional when the quarry floor reaches elevation 2,150 feet. Samples would be collected from materials undisturbed by post-2008 mining. The results of such confirmation slope stability testing would be documented in a final slope stability report, and if changes to the East Tailings Slopes design are warranted, the reclamation plan would be amended as required. Amendment of the reclamation plan would be subject to OMR review and comment and SMGB approval.⁷³

With implementation of these measures, potential adverse effects related to the East Tailings Slopes would be negligible.

Topographic Changes

The two hilltops that are composed of bedrock would be mined, which would result in the lowering of the elevation of the northwest hilltop from 2,350 feet amsl to 2,250 feet amsl (a difference of 100 feet), and from 2,480 feet amsl to 2,350 feet for the west-central hilltop (a difference of 130 feet). The topographic effect of this would be a flattening of the hilltops along

⁷¹ CHJ Consultants, Supplemental Slope Stability Investigation, Existing Tailings Slopes and Proposed Expansion Slopes of Super Creek Quarry, Whitewater River Area, Riverside County, California, prepared for Painted Hills Mining Company, May 31, 2012.

⁷² CHJ Consultants, Slope Stability Investigation, Existing Tailings Slopes and Proposed Expansion Slopes of Super Creek Quarry, Whitewater River Area, Riverside County, California, prepared for Whitewater Rock & Supply Company, February 15, 2011, p.3.

⁷³ Lilburn Corporation, Super Creek Quarry Expansion Revised BLM Plan of Operations and Amended Reclamation Plan No. 137 CA ID #91-33-0003, prepared for Painted Hills Mining Company, January 2013.

with the development of new quarry pits. The lower elevation of the mined hilltops would be a noticeable topographic change in the immediate area of the project, which would occur gradually as mining progresses (refer to Section 4.1.8, Visual Resources, for a description of how views would change from key viewpoints and visual simulations, which are shown in Figure 4-2). In addition, tailings would be placed on existing slopes in the Northwest and Southwest Waste Placement Areas, which would modify the existing slope and contour of those areas. While this would modify the slopes, the topographic change would be less apparent than the reduction in height of the two prominent hilltops. Although reclamation of the mined areas and tailings slopes would be conducted in accordance with SMARA and BLM guidelines, the topographic alterations would be a moderate adverse effect of implementing the Proposed Action.

Paleontology

The geologic material at the project site that would be quarried is composed of igneous intrusive bedrock (granite and gneiss) that has been altered through metamorphism and tectonic forces. No vertebrate or invertebrate animal fossils or plant remains are known to exist in such rock, nor would any be present in the fill (waste) material from quarrying. With the exception of the discharge outlet from the proposed new sedimentation basin #1 at the base of the Northwest Waste Placement Area, there would be no mining or reclamation activities that would affect Super Creek channel sediments. The Holocene alluvium and colluvium in the channel have a very low potential for intact fossil remains because of the creek's young age and fluvial processes that have reworked the sediments. There would be no adverse effects from mining or reclamation activities on paleontological resources.

4.1.5 Land Use

Impact Analysis Methodology

The analysis of land use is qualitative and is based on information presented in the Plan of Operations/Amended Reclamation Plan, which describes how the Proposed Action would modify the existing conditions at the site. The proposed changes were reviewed in the context of applicable land use plans and associated goals, policies, and/or objectives, which are described in Section 3.1.5, to determine whether there would be any conflicts or inconsistencies with those plans.

Federal Guidance for Determining Effects

The context for evaluating land use and planning impacts comprises the existing quarry operations and the proposed mining expansion area within the broader scope of applicable land use plans. The Proposed Action was evaluated to determine whether it would result in a substantial conflict with environmental plans or currently established on-site or off-site uses, including public utilities and rights-of-way.

CEQA Guidance for Determining Impact Significance

According to CEQA Guidelines Appendix G, the Proposed Action will have a significant land use and planning impact if it would physically divide an established community; conflict with any applicable land use plan, policy, or regulation for the purpose of avoiding or mitigating an environmental effects; or conflict with any applicable habitat conservation plan or natural community conservation plan.

Proposed Action Effects

Mining

The Proposed Action would continue and expand mining operations at the existing quarry site. Existing mining and reclamation operations have been taking place within the boundaries of planning areas for the California Desert Conservation Area Plan, as amended, including the Whitewater Canyon ACEC contained within, the Whitewater Canyon Grazing Allotment, the City of Desert Hot Springs, and the Coachella Valley Multiple Species Habitat Conservation Plan under permits issued by the BLM. Mining would continue the existing use under the Class L (Limited Use) designation in the California Desert Conservation Area Plan and the Whitewater Canyon ACEC Management Plan. Expanded mining operations, including the waste placement areas, would not represent a new use or a change in land use that would be inconsistent with the resource management policies of the applicable land use plans, included areas of Sonoran creosote bush scrub protected under the CVMSCHP. It would not result in any land use incompatibilities with wind energy uses to the south, nor would it affect grazing allotments. No existing rights-of-way or access to public facilities would be affected by the Proposed Action, and no new rights-of-way through public or private lands are proposed. Therefore, there would be no adverse land use planning effects related to mining.

Reclamation

Reclamation actions that would result in regrading and contouring the site to final slopes and use of erosion control methods would be consistent with federal requirements established in 43 CFR 3409. The proposed use of the reclaimed project land is vacant open space managed by the BLM. A post-reclamation open space land use would be consistent with the City of Desert Hot Springs General Plan designation. The Super Creek watershed is within the Upper Mission Creek/Big Morongo Canyon Conservation Area of the Coachella Valley Multiple Species Habitat Conservation Plan. Erosion from the existing tailings slopes into the Super Creek drainage would be limited by the existing and additional control measures and the monitoring and maintenance of these control measures. Sediment is not expected to degrade Super Creek with implementation of these control measures. In addition, even if some additional sediment were to enter the adjacent drainages, there is no sensitive habitat to affect, and resulting transport of sediment to downwind sensitive blow-sand habitat that is being preserved under the CVMSHCP's Upper Mission Creek/Big Morongo Canyon Conservation Area would be similar to the ecological processes occurring naturally in the area. Therefore, the Proposed Action would not result in any inconsistencies with the management and monitoring provisions of the CVMSHCP (see also Section 4.1.7, Vegetation, and Section 4.1.10, Wildlife). Reclamation would continue the existing use under the Class L (Limited Use) designation in the California Desert Conservation Area Plan and the Whitewater Canyon ACEC Management Plan. Therefore, there would be no adverse land use planning effects related to reclamation.

4.1.6 Traffic and Transportation

The Proposed Action includes no changes in rates of excavation, materials processing, or materials sales. Therefore, no changes are anticipated in the number of vehicle trips required to transport processed and sold materials or to transport employees and other mine-related personnel to and from the quarry site. In addition, ongoing mine reclamation activities under the

Proposed Action would be carried out in a manner consistent with current practices and therefore would result in no substantive changes to future vehicle traffic relative to current reclamation practices. For these reasons, the effects on traffic and transportation would be negligible.

4.1.7 Vegetation

Impact Analysis Methodology

A biological resources assessment, jurisdictional delineation, and a separate study for triple-ribbed milk-vetch were prepared for the Proposed Action in 2013 and 2014. The results of these studies and recommendations are incorporated into the analysis.

Federal Guidance for Determining Effects

The objectives of the BLM special-status species policy are (1) to conserve and/or recover federally listed species and the ecosystems on which they depend so that protections are no longer needed for these species; and (2) to initiate proactive conservation measures that reduce or eliminate threats to BLM sensitive species to minimize the likelihood of and need for formal listing of these species under the ESA. When considering threatened or endangered species and their critical habitats under NEPA, significance depends on the degree to which an action would adversely affect these species or their habitats. As the BLM NEPA handbook (2008) describes, an assessment of significance under NEPA requires consideration of both context (or the setting of the Proposed Action) and intensity (or severity of effect). In view of these objectives and considerations, mitigation is recommended to reduce potential impact where the project has the potential to adversely affect vegetation, including individual sensitive plant species and sensitive natural communities.

CEQA Guidance for Determining Impact Significance

According to CEQA Guidelines Appendix G, the Proposed Action will have a significant vegetation impact if it would either directly or through habitat modifications adversely affect any species identified as candidate, sensitive, or special-status in local or regional plans, policies, or regulations, or by the CDFW or USFWS; adversely affect any riparian or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFW or USFWS; substantially adversely affect protected wetlands (including jurisdictional waters of the U.S.) through direct removal, filling, hydrological interruption, or other means; or conflict with local policies or ordinances protecting biological resources or adopted habitat conservation plans.

Proposed Action Effects

Special-Status Plant Species

Triple-Ribbed Milk-Vetch

Special-status plant species could occur on the project site. Specimens of the federally listed endangered, CNPS List 1B.2 triple-ribbed milk-vetch (*Astragalus tricarinatus*) were recorded within the expansion area in 2009. The project site was surveyed for sensitive plant species in May 2013. The survey findings indicate that marginally suitable habitat for the triple-ribbed milk-vetch occurs in Super Creek Wash. One known location for the species was identified in previous surveys in an upland area immediately southwest of the existing quarry operations. The known location is within the proposed 33.4-acre expansion area and was included in the focused

survey. The specimen was not observed; absence was attributed to disturbance associated with mining activities, low rainfall (drought), and/or natural life cycle as discussed below. The known record for *Astragalus tricarinatus* within the Super Creek Quarry mine boundary appears to be a waif occurrence.⁷⁴ BLM staff informally consulted with USFWS staff in April 2014 to request concurrence that the Proposed Action is not likely to adversely affect triple-ribbed milk-vetch. The USFWS provided concurrence with BLM staff conclusions that the waif population has died out and is no longer extant, and that based on available information, the Proposed Action may affect but is not likely to adversely affect *Astragalus tricarinatus*.⁷⁵ No adverse effects on this species are anticipated as a result of the Proposed Action with implementation of the environmental protection measure MM-BIO-4 presented in Section 2.1.16 of this EA-IS/MND. Measure MM-BIO-4 requires that should the plant be discovered during pre-ground disturbance surveys, the USFWS and CDFW would be notified regarding appropriate avoidance or disturbance minimization measures and allowed to transplant the species, if appropriate.

Other Special-Status Plants

While no other special-status plants were observed during the field reconnaissance or botanical investigations, sensitive plants (other than triple-ribbed milk-vetch) could be overlooked outside their blooming season or in times of drought, or establish themselves prior to the onset of construction activities. Botanical investigations concluded that a potential for false negative results exists due to the possibility of the plants being present but not detectable at the time of the survey or due to the limited amount of rainfall for the current year. Therefore, implementation and ongoing project activities associated with the Proposed Action may affect special-status plants, both directly (removal) and indirectly (altered site conditions).⁷⁶ With implementation of environmental protection measure MM-BIO-4 presented in Section 2.1.6 of this EA-IS/MND, botanical surveys in areas not previously disturbed would be performed by a qualified botanist prior to ground disturbance. If sensitive plants are located during the surveys, the USFWS and/or CDFW (based on the species regulatory status) would be notified regarding appropriate avoidance or disturbance minimization measures and allowed to transplant the species, if appropriate. Project activities would be restricted based on USFWS and/or CDFW guidance. Restrictions may include either establishment of avoidance buffer zones, installation of silt fences, and/or alteration of the construction schedule.

Riparian or Other Sensitive Natural Community

Although sensitive natural communities have been identified in the vicinity of the project area, none were documented within or immediately adjacent to areas proposed for disturbance. Therefore, the Proposed Action is not expected to substantially affect any sensitive habitats (other than jurisdictional waters of the U.S. that are described below). To ensure sensitive habitats are not adversely affected, it is recommended that all project activities remain within the

⁷⁴ Lilburn Corporation, Biological Assessment Memo Report for the Revised Plan of Operations and Amended Reclamation Plan for the Super Creek Quarry, March 2014.

⁷⁵ Email communication from Pete Sorenson, Division Chief, U.S. Fish and Wildlife Service Palm Springs Office, to Joyce Schlachter, Wildlife Biologist, BLM Palm Springs-South Coast Field Office, May 7, 2014.

⁷⁶ Lilburn Corporation, Biological Resources Assessment for the Revised Plan of Operations and Amended Reclamation Plan for the Super Creek Quarry, August 2013.

established project area and unnecessary vehicle or personnel activity be avoided outside the project area.

Wetlands/Jurisdictional Waters of the U.S.

Federally protected wetlands or waters of the U.S. as defined by Section 404 of the Clean Water Act include, but are not limited to, marsh, vernal pool, and coastal habitat. Super Creek and other drainages identified within the project area are tributary to the Whitewater River that is a tributary of the Salton Sea, a Traditional Navigable Water. As such, actions affecting any tributaries of this body of water would be regulated under Sections 404 and 401 of the CWA. Because the Proposed Action would result in the loss of approximately 0.72 acre of jurisdictional waters of the U.S. (ephemeral desert drainages), project activities shall be regulated by the USACE under Section 404 of the CWA and by the RWQCB under Section 401 of the CWA. Also, under Section 1602 of the California Fish and Game Code, the CDFW has jurisdiction over any feature that contains a bed, bank, or channel. Drainages observed on-site exhibit these features and would be regulated by the CDFW. No adverse effects on jurisdictional waters of the U.S. are anticipated as a result of the Proposed Action with implementation of environmental protection measure MM-BIO-5 presented in Section 2.1.16 of this EA-IS/MND. Measure MM-BIO-5 requires that the 2013 jurisdictional determination be provided to the USACE for verification, that mitigation be implemented to achieve no net loss of waters of the U.S., and that the appropriate permits (e.g., USACE permit, RWQCB Water Quality Certification, and CDFW Lake or Streambed Alteration Agreement) are obtained prior to any on-site project disturbance of jurisdiction waters.

Local Policies or Ordinances

The western part of the project site is included in the limits of the Whitewater Canyon ACEC, designated by the BLM as part of the California Desert Conservation Area. The Whitewater Canyon ACEC encompasses portions of the San Gorgonio Pass and the Whitewater River canyon. Vegetation resources documented in the ACEC include natural communities, such as riparian woodlands, mesquite thickets, and a fan palm oasis. No sensitive natural community managed by the ACEC is located within the project area. Furthermore, the existing mining operations and potential expansion of operations are considered as part of the ACEC. With implementation of the other measures presented in this section, the Proposed Action would not conflict with the objectives of the Whitewater Canyon ACEC management plan. Therefore, the Proposed Action would not conflict with local policies and ordinances.

Approved Local, Regional, or State Habitat Conservation Plans

A review of all adopted local, regional, or state habitat conservation plans was conducted as part of this EA-IS/MND to determine whether the Proposed Action would result in any conflict with those plans. Super Creek Quarry is located within the Big Morongo Canyon Conservation Area of the CVMSHCP area. Descriptions of biological resources at the existing quarry are not included in CVMSHCP documentation, most likely because of the ongoing anthropogenic disturbance related to mining activities. One sensitive natural community, Sonoran creosote bush scrub, is identified in the CVMSHCP as being located in the vicinity of the project area. Additionally, the project location is identified as a sand source area, which is an important component of sand dune and sand field resources within the conservation area. As previously

discussed, habitat on-site consists of brittlebush-white bursage, so the Proposed Action is not expected to substantially affect sensitive natural communities identified in the CVMSHCP. Also, the extension of mining activities is not expected to reduce the suitability of the area as a sand source.

Three sensitive plant species covered by the plan, Coachella Valley milk-vetch, Little San Bernardino Mountains linanthus, and triple-ribbed milk-vetch, were given special consideration during focused botanical surveys at the site. None of these species were identified within the project area during surveys performed in 2013 (see above). However, a pre-ground disturbance botanical survey would be completed (environmental protection measure MM-BIO-4) to further reduce the likelihood of impact to species covered in the CVMSHCP. If triple-ribbed milk-vetch is present, BLM and USFWS staff will coordinate on appropriate actions, which could include formal consultation unless disturbance to the plant can be avoided by reconfiguring activities on the project site.

With implementation of environmental protection measure MM-BIO-4 presented in Section 2.1.16 of this EA-IS/MND, the Proposed Action would not conflict with local conservation plans.

4.1.8 Visual Resources

Impact Analysis Methodology

An analysis of the visual impact of the proposed expansion and reclamation of Super Creek Quarry was prepared by Webber & Webber Mining Consultants Inc. under contract to the Whitewater Rock and Supply Co. The results of this analysis along with a detailed description of the methods used for the evaluation is contained in the Plan of Operations/Amended Reclamation Plan in a report entitled “Visual Impact Analysis” (see Appendix A: Appendix E). The information and analysis in the Visual Impact Analysis was reviewed and found to be accurate and appropriate. Unless otherwise noted, the information and analysis presented herein is taken from the Webber & Webber Visual Impact Analysis. The information presented in the Visual Impact Analysis was supplemented to address the proposed excavation in the southwest portion of the quarry site and the creation of the Southwest Waste Placement Area.

The Visual Impact Analysis used the BLM Visual Resource Management system as a guideline for assessing the visual impact of the proposed quarry expansion to determine the Visual Resource Inventory⁷⁷ and Visual Resource Contrast Rating⁷⁸ of the proposed quarry expansion. The Visual Impact Analysis incorporated the review of basic features of the landscape land/water surface, vegetation, and structures and examines the four basic elements of each feature. These elements are:

⁷⁷ The visual resource inventory consists of a scenic quality evaluation, sensitivity level analysis, and delineation of distance zones. Based on these three factors, BLM-administered lands are placed into one of four visual resource inventory classes, which represent the relative value of the visual resources.

⁷⁸ The visual resource contrast rating is a systematic process to analyze potential visual impacts. Using the basic design elements of form, line, color, and texture, a comparison is made between the existing landscape and how the landscape would change with the project to describe the visual contrast created by the project.

Form: The dimensional shape and/or dimensional mass of an object or group of objects that appear unified in relation to the landscape.

Line: The path, real or imagined, that the eye follows when perceiving abrupt differences in form, color, or texture or when objects are aligned in a one-dimensional sequence, usually evident as the edge of shapes or masses in the landscape.

Color: The property of reflecting light of a particular intensity and wavelength (or mixture of wavelengths) to which the eye is sensitive. This is a major visual property of surfaces.

Texture: The aggregation of small forms or color mixtures into a continuous surface pattern: the aggregated parts are enough that they do not appear as discrete objects in the composition of the landscape.

These elements of the landscape features at the current quarry site were compared to projected changes in landscape due to the Proposed Action to determine a level of contrast between existing conditions and project conditions. The degree of contrast is characterized as either “strong,” “moderate,” “weak,” or “none.”⁷⁹

Webber & Webber conducted several site visits to the site and region and took several panoramic photographs from various positions along nearby streets and highways with views of the project site. The visual contrast of the pre-project and post-project conditions was evaluated from three key observation points (KOP1, KOP2, and KOP3). The selection of the viewpoints is described in the Visual Impact Analysis. A fourth KOP (KOP4) was added as part of the evaluation presented in this EA-IS/MND to address the visual impact of proposed activities in the southwest portion of the project site as observed from viewpoints to the south of the project site. The KOPs used in this analysis are shown in Figure 4-1. Webber & Webber prepared visual simulations of post-project conditions for KOPs 1, 2, and 3, which are contained in the Visual Impact Analysis (see Appendix A: Appendix E). A visual simulation prepared for KOP4 is shown in Figure 4-2.

Federal Guidance for Determining Effects

By applying the BLM Visual Resources Management system discussed above, an impact on visual resources is considered to have an adverse effect if the Proposed Action will result in a “strong” or “moderate” visual contrast relative to the existing landscape.

CEQA Guidance for Determining Impact Significance

According to CEQA Guidelines Appendix G, the Proposed Action will have a significant visual resources/aesthetics impact if it would have a substantial adverse effect on a scenic vista, substantially damage scenic resources within a state scenic highway, or substantially degrade the existing visual character or quality of the site and its surroundings.

⁷⁹ The degree of contrast rating criteria uses the following definitions: *Strong* – The element of contrast demands attention, will not be overlooked, and is dominant in the landscape. *Moderate* – The element contrast begins to attract attention, and begins to dominate the characteristic landscape. *Weak* – The element contrast can be seen, but does not attract attention. *None* – The element contrast is not visible or perceived.

Proposed Action Effects

The following describes the potential visual effects of the Proposed Action from key observation points.

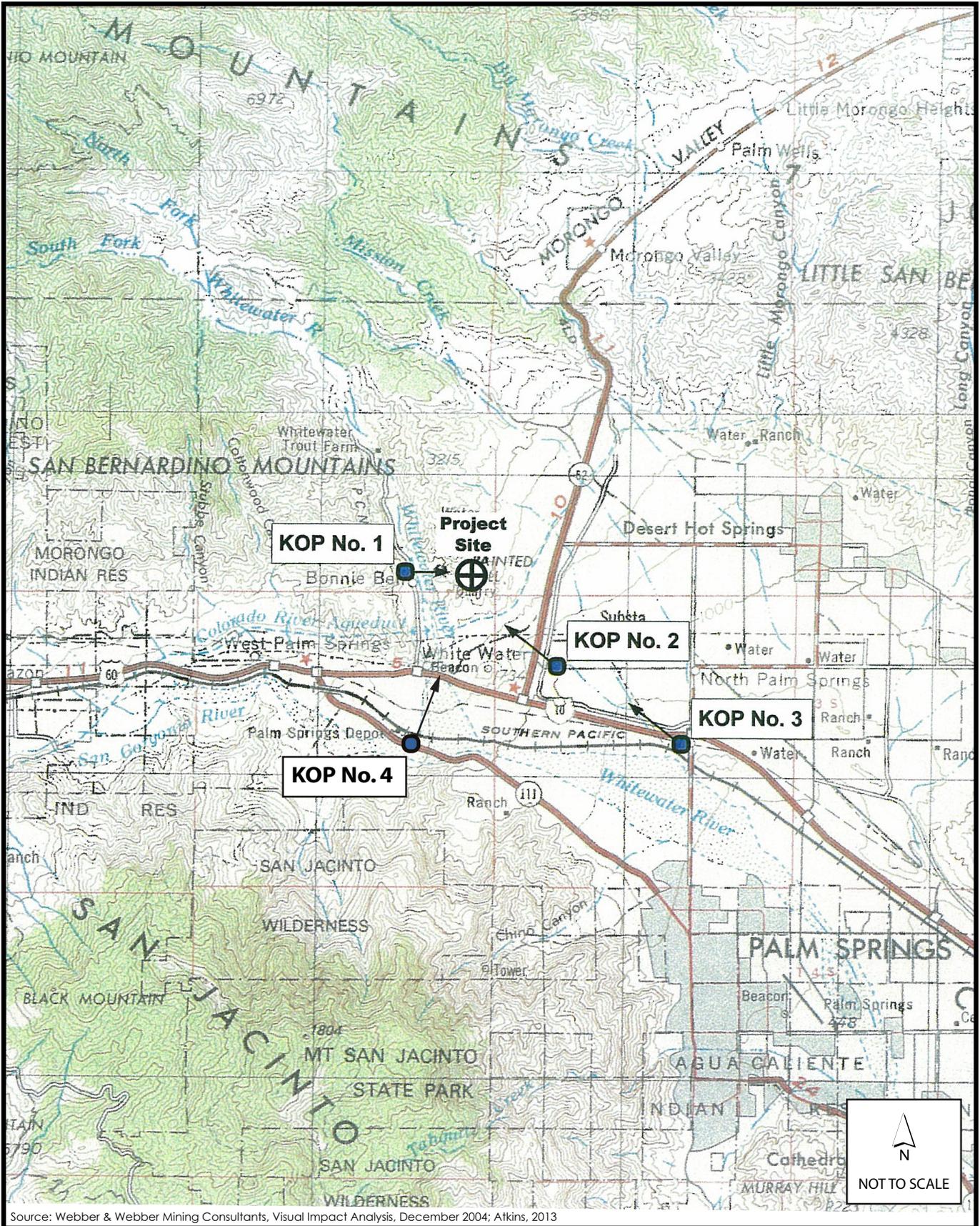


Figure 4-1
Key Observation Point (KOP) Locations



Pre-Mining View of Super Creek Quarry from KOP4



Post-Mining View of Super Creek Quarry from KOP4

Source: Atkins, 2013

Figure 4-2
Pre-Mining View and Post Mining Simulation of View from KOP4

Key Observation Point 1 (KOP1)

KOP1 is located approximately 1 mile west of the Super Creek Quarry in the Whitewater River canyon just north of the small residential community of Bonnie Bell. The overall view of the eastern landscape from KOP1 consists of a gently sloping river basin that leads to the base of the San Bernardino Mountain Range foothills that form the eastern boundary of Whitewater Canyon. The foothills rise steeply approximately 600–800 feet above the river basin and are covered in sparse vegetation. The two peaks that would be excavated under the Proposed Action are prominent from this view. No man-made structures are visible from KOP1, nor are there any visible signs of mining activity.

Under the Proposed Action, the top horizontal edge of the two peaks would be flattened, producing a corresponding slight alteration to the bottom “edge” of the skyline. The visual simulation of post-project conditions viewed from KOP1 is shown in Figure 3 in the Visual Impact Analysis (Appendix E of the Plan of Operations/Amended Reclamation Plan). As indicated in the simulation, the overall visual contrast form of KOP1 compared to the view of the present-day landscape would be weak to moderate. Due to the lack of any additional visual features presented by the Proposed Action, no intrusive distractions would be added to the landscape. The reduction in height of two of the smaller, steeper peaks would be noticeable but would occur gradually and would not be a noticeable distraction. The impact on the existing overall landscape view would affect only a small portion of the overall view. Therefore, the Proposed Action would not attract attention at KOP1.

Key Observation Point 2 (KOP2)

KOP2 is located approximately 2.5 miles southeast of the quarry site at the intersection of Highway 62 and Dillon Road (see Figure 4-1). The present-day view has largely been created through many decades of human development. As a result, the overall landscape presently includes several prominent man-made features: Highway 62, vegetation within the highway divider, signs, utility poles, residences, and wind energy turbines. The overall view from KOP2 is characterized by extreme irregularities in form, line, texture, and color. The natural landscape from KOP2 consists of low rolling hills in the foreground leading to moderately high intermediate foothills with the large mountain range just visible as a darker strip about the foothills in the distance. The Super Creek Quarry site is visible along the interface of land and sky, in large part due to color variations caused by excavation activities that have removed overburden and vegetation to expose the reddish-gold bedrock beneath. In addition, the quarry site’s East Tailings Slopes waste placement area is visible as a relatively uniform expanse of yellow-tan color just below the excavation area.⁸⁰ The scale of the existing mine disturbance, however, is small set within the overall landscape from KOP2 and visible only due to the localized discoloration.

The visual simulation of post-project conditions viewed from KOP2 is shown in Figure 5 in the Visual Impact Analysis (Appendix E of the Plan of Operations/Amended Reclamation Plan.) As indicated in the simulation, the contrast provided by the Proposed Action would actually decrease after completion of mining and reclamation compared to present-day contrast ratings.

⁸⁰ Based on observations during site reconnaissance, June 26, 2013.

This decrease would result from the removal of exposed bedrock currently visible from KOP2, the lowering of the top elevation of the East Tailings Slopes waste placement area, and the long-term reestablishment of vegetation on the tailings area, all of which would serve to reduce the current color contrast of the present-day quarry site.

Key Observation Point 3 (KOP3)

KOP3 is located approximately 6 miles east of the project site near the eastbound Indian Avenue off-ramp, just south of I-10. KOP3 was selected to be indicative of views of the project site experienced by travelers along I-10. As noted in the Visual Impact Assessment and confirmed during the June 2013 site visit, views of the project site from I-10 closer to the quarry site are obscured by topography.

The current view of the quarry site from KOP3 is shown in Figure 6 in the Visual Impact Analysis (Appendix E of the Plan of Operations/Amended Reclamation Plan). From KOP3, the quarry site is situated in the background portion of the landscape, just above the I-10 corridor. The exposed rock surfaces of the active mine site clearly contrast with the surrounding region and are visible as a small, lighter-colored form set against the slightly darker tan-colored foothills. From KOP3, the project site consumes less dimensional mass visually than KOP1 or KOP2 due to the increased distance from the site.

The visual simulation of post-project conditions viewed from KOP3 is shown in Figure 7 in the Visual Impact Analysis (Appendix E of the Plan of Operations/Amended Reclamation Plan). As indicated in the simulation, the overall visual contrast rating compared to the view of the present-day landscape would be very weak from KOP3. The contrast provided by the Proposed Action when completed would actually decrease compared to present-day contrast provided by the existing quarry site for the same reasons discussed above for KOP2. Therefore, the Proposed Action may be noticed from KOP3, but it would not attract attention within the characteristic landscape.

Key Observation Point 4 (KOP4)

As shown in Figure 4-1, KOP4 is located approximately 4 miles south of the quarry site at the intersection of Tipton Road and Highway 111. The current view of the quarry site from KOP4 is shown in Figure 4-2. From KOP4, the quarry site appears in the distant background of the landscape at the horizon. Despite the distance to the site from KOP4, the color contrasts created by the exposed rock surfaces and the East Tailings Slopes waste placement area relative to the surrounding landscape are clearly visible. Although visible from KOP4, the mine site appears small and is of relatively little dimensional mass due to the distance of KOP4 from the project site.

The visual simulation of post-project conditions viewed from KOP4 is shown in Figure 4-2. As illustrated in the simulation, the overall visual contrast rating compared to the view of the present-day landscape would be weak from KOP4. The contrast provided by the Proposed Action when completed would decrease due to the reduction in size of the East Tailings Slopes waste placement and the flattening of the existing peak in the center of the project site. The creation of the Southwest Waste Placement Area under the Proposed Action, however, would increase contrast by placing lighter-colored material on the southern exposure of the project site,

in view of KOP4. Due to the site’s location at the horizon of the foothills against the sky, changes in line and form due to the Proposed Action would be visible from KOP4, but this is considered “weak” because of the distance to the site from KOP4. Taking this into account, the effects of the Proposed Action on the character of the landscape may be noticed from KOP4 but would not attract attention.

Scenic Highways and Scenic Vistas

Because the quarry site does not appear within view of any designated state scenic highways, the Proposed Action would have no effect on scenic resources within a state scenic highway.

Conclusion

Through application of the BLM Visual Resources Management system, the visual impact of the Proposed Action on visual resources was evaluated from the four KOPs described above. The results of that evaluation are shown in Table 4-1.

Table 4-1: Visual Assessment from Key Observation Points

	Form	Line	Color	Texture
KOP1	Moderate	Weak	None	None
KOP2	Weak	Weak	None	None
KOP3	Weak	None	None	None
KOP4	Weak	Weak	Weak	Weak

Based on the results above, the Proposed Action would result in a moderate visual contrast finding from only one key observation point: KOP1. From KOP1, the Proposed Action would result in a “moderate” contrast in form due to the flattening of the two peaks, which are prominent as viewed from KOP1 and near the community of Bonnie Bell. This contrast can be mitigated by rounding the tops of decorative rock extraction area slopes to decrease the contrasting edges of the disturbance according to the recommendations presented in the Visual Impact Analysis. Therefore, no adverse effects are anticipated on visual resources as a result of the Proposed Action with implementation of environmental protection measure MM-AES-1 presented in Section 2.1.16 of this EA-IS/MND.

4.1.9 Wastes, Hazardous or Solid

Impact Analysis Methodology

The analysis of hazardous and solid waste impacts is qualitative and is based on information presented in the Plan of Operations/Amended Reclamation Plan.

Federal Guidance for Determining Effects

The context for evaluating hazardous and solid waste impacts in this case is the project site and immediate vicinity on which proposed mining and reclamation activities would occur. The Proposed Action was evaluated to determine whether it would result in the use of hazardous materials or generation of hazardous waste that would pose a human health or environmental

risk; involve activities that could encounter known or potential soil or groundwater contamination; or generate substantial amounts of solid waste.

CEQA Guidance for Determining Impact Significance

According to CEQA Guidelines Appendix G, the Proposed Action will have a significant hazardous or solid waste impact if it would create a significant hazard to the public or the environment through the routine use, transport, or disposal of hazardous materials or as a result of upset or accident conditions; or cause landfill capacity to be exceeded or conflict with solid waste laws and regulations.

The CEQA Guidelines also suggest consideration of impacts on school properties from hazardous emissions, air safety hazards, and interference with emergency response planning. These potential impacts do not require evaluation because there are no schools in the vicinity of the project site. The site is not within a land use planning safety zone for any airport. Access to the quarry is a private road, and no changes in road access or design are proposed; therefore, there would be no impact on emergency response.

Proposed Action Effects

Mining

All rock products and waste rock are naturally occurring rock. Chemicals or other hazardous materials are not used or produced during processing of materials at the quarry, nor are any proposed for future use. Identical to existing conditions, blasting or storage of explosives on-site is not proposed. Diesel fuel would continue to be delivered by truck to the 1,000-gallon diesel fuel aboveground storage tank (AST) in the quarry. No increase in diesel deliveries or storage volumes is proposed.

Expansion of mining operations would involve excavation into bedrock to create the quarry pit and development of new waste placement areas. There is no known or suspected soil contamination in the proposed pit expansion or waste placement areas because the site has been used exclusively for mining for several decades and was natural, undeveloped land prior to that. Therefore, there would be no potential to encounter soil contamination during active excavation. There is the potential for minor spills during fueling in the quarry or petroleum leaks from heavy equipment, similar to existing operations. There would be no change in the types or number of heavy equipment in use, and this would be a negligible effect. Further, any soils that may have become contaminated from spills would be stockpiled, tested for contaminants, and removed from the site in accordance with all federal, state, and local regulations to an approved hazardous waste repository.

Identical to existing conditions, the majority of any heavy equipment maintenance would continue to occur off-site at Painted Hills repair facility; however, unplanned repairs or minor maintenance may occur at the quarry site if required. Any waste oil generated by the project would be collected and transported for off-site disposal by approved methods via properly trained and licensed personnel. Painted Hills maintains an existing Business Plan, a hazardous materials inventory, and a SPCC which include employee training, record keeping, preventive maintenance and BMPs. These plans are submitted to the Hazardous Materials Management

Division, the CUPA for Riverside County, responsible for regulating hazardous materials business plans and hazardous waste.

Because there would be no change in the quantities or types of hazardous materials used or in solid or hazardous waste generated during mining compared to existing conditions, there would be no adverse effects.

Reclamation

Reclamation activities would involve the use of heavy equipment, similar to that used for mining, which would be a potential source of minor soil contamination in the event of spills or leaks. Fuel in the diesel AST would be removed and the surplus diesel and the AST would be disposed of in accordance with applicable hazardous waste requirements. Soil around the AST would be tested for contamination. Prior to final recontouring and revegetation of the site, a final environmental site review would be conducted by the BLM to verify that soil contamination, if any, has been remediated. Potential adverse effects of reclamation related to hazardous materials and wastes would be negligible.

Equipment not required for final reclamation would be removed from the site. General refuse (which is minimal) would be removed and disposed of at an appropriate landfill site. Equipment that would no longer be needed (e.g., load hopper, old crusher, screens, steel conveyors) would be removed by a scrap metal company and could be recycled. Effects on landfill capacity would be negligible.

4.1.10 Wildlife

Impact Analysis Methodology

A biological resources assessment and desert tortoise survey were prepared for the Proposed Action in 2013. The results of these studies and recommendations are incorporated into the analysis.

Federal Guidance for Determining Effects

The objectives of the BLM special-status species policy are to (1) conserve and/or recover federally listed species and the ecosystems on which they depend so that protections are no longer needed for these species; and (2) initiate proactive conservation measures that reduce or eliminate threats to BLM sensitive species to minimize the likelihood of and need for formal listing of these species under the ESA. When considering threatened or endangered species and their critical habitats under NEPA, significance depends on the degree to which an action would adversely affect these species or their habitats. As the BLM NEPA handbook (2008) describes, an assessment of significance under NEPA requires consideration of both context (or the setting of the Proposed Action) and intensity (or severity of effect). In view of these objectives and considerations, mitigation is recommended to reduce potential impacts where the project has the potential to adversely affect sensitive wildlife species.

CEQA Guidance for Determining Impact Significance

According to CEQA Guidelines Appendix G, the Proposed Action will have a significant impact on wildlife if it would directly or through habitat modifications adversely affect any species

identified as candidate, sensitive, or special-status in local or regional plans, policies, or regulations, or by the CDFW or USFWS; 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; or conflict with local policies or ordinances protecting biological resources or adopted habitat conservation plans.

Proposed Action Effects

Candidate, Sensitive, or Special-Status Wildlife Species

A review of available data regarding the potential for sensitive wildlife species to occur on-site and a general biological resources survey determined that three sensitive wildlife species (desert tortoise, burrowing owl, and Le Conte's thrasher) could forage, find cover, or reproduce within the project area. Therefore, these species could be affected by the Proposed Action.

Additionally, habitat at the site could provide suitable nesting and foraging opportunities for many avian species, including some raptors and migratory birds (other than burrowing owl). Raptors and raptor nests are considered to be a special resource by federal and state agencies and are protected under the Migratory Bird Treaty Act (MBTA) and the California Code of Regulations. All migratory birds are also protected under the MBTA. Project implementation would impact areas that could provide suitable habitat for these avian species.

However, no adverse effects are anticipated on desert tortoise, burrowing owl, or raptors or other migratory birds including Le Conte's thrasher as a result of the Proposed Action with implementation of environmental protection measures MM-BIO-1, MM-BIO-2, and MM-BIO-3 presented in Section 2.1.16 of this EA-IS/MND. These measures require clearance surveys in accordance with established protocols for desert tortoise and burrowing owl (MM-BIO-1 and MM-BIO-2) and active nest surveys (MM-BIO-3). The measures identify procedures that must be followed to protect the species from incidental take or loss through direct mortality or nest abandonment in the event the species are present.

Wildlife Movement

Both Super Creek and the Whitewater River provide a wildlife corridor function. Other than detention basin modifications situated immediately adjacent to Super Creek, the proposed activities will occur outside of and away from these two features. Actions near Super Creek are expected to occur when the area is naturally dry and be short-term in duration. Therefore, when considering the context of the area and intensity of the planned modifications, impacts on Super Creek as a wildlife corridor are not expected to be adverse or significant. Also, receipt of appropriate permits for maintaining water quality and stabilization of jurisdictional drainages, as described above, will reduce overall potential impact to the waterway. The Whitewater River would not be directly impacted by proposed activities, and potential effects on tributaries would be negligible with permits for jurisdictional features (as described above). Therefore, the Proposed Action is not expected to substantially affect either wildlife corridor. There are no known native wildlife nursery sites within or adjacent to the project location.

Local Policies or Ordinances Protecting Wildlife Resources

The western part of the project area is included in the limits of the Whitewater Canyon ACEC (see Figure 3-1), designated by the BLM as part of the CDCA. The Whitewater Canyon ACEC

encompasses portions of the San Gorgonio Pass and the Whitewater River Canyon. Wildlife resources documented in the ACEC include arroyo toad (*Anaxyrus californicus*), desert tortoise, and migrating species, such as least Bell's vireo (*Vireo bellii pusillus*) and southwestern willow flycatcher (*Empidonax traillii extimus*). Other than the desert tortoise (discussed above), habitat within the project area is not typically suitable for presence of wildlife managed by the ACEC. Furthermore, the existing mining operations and potential expansion of operations are considered as part of the ACEC. With implementation of the other measures presented in this section, the Proposed Action would not conflict with the objectives of the Whitewater Canyon ACEC management plan. Therefore, the Proposed Action would not conflict with local policies and ordinances.

Local, Regional, or State Habitat Conservation Plans

The Super Creek Quarry is located within the Big Morongo Canyon Conservation Area of the CVMSHCP. Descriptions of biological resources at the existing quarry are not included in CVMSHCP documentation, most likely because of the ongoing anthropogenic disturbance related to mining activities. One sensitive wildlife species, desert tortoise, is identified in the CVMSHCP as being located in the vicinity of the project area. Measures to reduce potential impact on desert tortoise are described above. With implementation of these measures, the Proposed Action is not expected to substantially affect sensitive wildlife identified in the CVMSHCP.

4.2 No Action Alternative

The No Action Alternative is described in detail in Section 2.2, above. In summary, under the No Action Alternative, the Proposed Action would not be implemented. Painted Hills would not acquire approval to expand its existing Super Creek Quarry and would not amend its current reclamation plan. As such, Painted Hills would continue to mine the existing quarry under its approved BLM Plan of Operations and Reclamation Plan No. 137 (CA-39566). Mining and processing operations would be limited to approximately 23.8 acres of the Super Creek Quarry site. Painted Hills would continue to excavate material at a rate of 50,000 tons per year with approximately 25,000 tons per year sold as product and 25,000 tons per year of waste, but because of limitations in area available for waste placement, mining operations would become unworkable within the next 6 to 12 months.

Upon completion of mining activities under the No Action Alternative, reclamation of the quarry site would proceed under Reclamation Plan No. 137, with some modification likely to be required by the SMGB as described in Section 2.2.

4.2.1 Air Quality and Greenhouse Gas Emissions

The No Action Alternative would include quarry areas of 23.8 acres and an additional 27 acres of inactive East Tailings Slopes that were utilized to deposit waste material. The No Action Alternative would operate at similar extraction rates as the Proposed Action. The plant operates at the annual extraction rate of approximately 30,000 bcy per year, from which 16,667 bcy is

waste material. Of the total amount of material extracted each year, approximately 25,000 tons (17,500 loose cubic yards) of product would be exported from the site and the rest would remain on-site in two designated waste placement areas. Under the No Action Alternative, travel on dirt roads and exploration activities would create fugitive dust, causing similar negligible impacts on air resources as the Proposed Action. Because the daily and annual plant operations (including equipment and truck travel on dirt road) would not change under the No Action Alternative in comparison to the Proposed Action, daily and annual impacts to air quality under the No Action Alternative would be the same as the impacts associated with the Proposed Action.

The significance of air quality and climate change impacts is analyzed based on daily or annual emissions; therefore, the significance of the No Action Alternative and Proposed Action Alternative would be identical. However, under the No Action Alternative, the plant would operate only for another year at most, while the Proposed Action would continue for another 25 years. Therefore, the No Action Alternative would result in less air pollutant and GHG emissions over its remaining lifetime than the Proposed Action. Table 4-2 (Remaining Project Lifetime Emissions) shows the increase in emissions of criteria pollutants and GHG emissions over the remaining life of the No Action Alternative compared to the Proposed Action Alternative. As shown, the Proposed Action results in 24 years of emissions beyond what would be generated under the No Action Alternative.

Table 4-2: Remaining Project Lifetime Emissions

	Pollutant Emissions (tons)						
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}	CO _{2e}
No Action Alternative	1.84	14.04	7.85	0.02	1.52	1.03	1,792
Remaining Years of Operation	1	1	1	1	1	1	1
Total Lifetime Emissions	1.84	14.04	7.85	0.02	1.52	1.03	1,792
Proposed Action Alternative	1.84	14.04	7.85	0.02	1.52	1.03	1,792
Remaining Years of Operation	25	25	25	25	25	25	25
Total Lifetime Emissions	46.00	351.00	196.25	0.50	38.00	25.75	44,800
Net Increase over No Action Alternative	44.16	336.96	188.4	0.48	36.48	24.72	43,008

CO = carbon monoxide; NO_x = nitrogen oxides; VOC = volatile organic compounds; SO_x = sulfur oxides
 PM₁₀ = respirable particulate matter; PM_{2.5} = fine particulate matter
 (1) Net increase is determined by subtracting emissions from the No Action Alternative from emissions anticipated with the implementation of the Proposed Action.
 Source: CalEEMod Version 2011.1.1 and AP 42 Section 13.2.2 Unpaved Roads. See Appendix B for data sheets.

4.2.2 Cultural Resources

Under the No Action Alternative, Painted Hills would maintain current excavation, processing and transport operations until limitations on the availability of on-site locations for waste placement would force operations to shut down. It is estimated that operations could continue for up to 6 to 12 months without the acquisition of new placement areas. Under this alternative, no previously undisturbed areas would be subject to excavation. Under the No Action Alternative,

environmental protection measures presented in Section 2.1.16 of this EA-IS/MND would not be implemented. Because no known cultural resources are located within the Super Creek Quarry project area and because future work under the alternative would be limited to previously disturbed areas, the No Action Alternative would have no adverse effect on cultural resources.

4.2.3 Drainage, Erosion, and Sediment

Under the No Action Alternative, Painted Hills would continue to mine the existing quarry under its approved BLM Plan of Operations and Reclamation Plan No. 137. Mining and processing operations would be limited to approximately 23.8 acres of the Super Creek Quarry site at which time Reclamation Plan No. 137 would be implemented. Improvements to existing drainage and sediment control facilities included in the Proposed Action, such as the construction of new detention basins and the expansion of existing basins, would not be implemented under the No Action Alternative; however, the existing site drainage system and sediment control facilities (described in detail in Section 3.1.3, above) would remain in place. In addition, it is assumed that the SMGB would require certain improvements to those facilities as part of a reclamation plan in order to comply with SMARA.

As noted above, the existing drainage system is self-contained, and the existing quarry pit would continue to act as a retention area to collect all runoff from the active quarry and processing areas under the No Action Alternative. To address runoff from the existing waste placement areas, Painted Hills would continue to backfill existing rills and gullies with graded rock material to break up concentrated flows and to reduce velocity within the gullies to decrease erosion potential. The operator would also continue to use an excavator and a crane with a rigged sled to remove excess fines from the top of the slopes to reduce erosion potential until the conclusion of quarry operations.

With the continued maintenance and improvement of existing drainage and sediment control facilities, the No Action Alternative would result in no adverse change to existing drainage, erosion, and sediment control conditions on the project site. In addition, implementation of site reclamation, including the revegetation of previously disturbed surfaces would reduce future erosion potential on the project site. Therefore, the No Action Alternative would have no adverse effect related to drainage, erosion, or sedimentation.

4.2.4 Geology, Soils, Mineral Resources, and Paleontology

Under the No Action Alternative, Painted Hills would maintain current excavation, processing, and transport operations for up to 6 to 12 months until constraints on waste placement would force operations to shut down. Under this alternative, no previously undisturbed areas would be subject to excavation. Therefore, the No Action Alternative would have no adverse effect on project site geology or soils. In addition, implementation of the No Action Alternative would not preclude Painted Hills, or any other potential operator, from reopening the site for future excavation of on-site mineral resources.

4.2.5 Land Use

Current land use on the Super Creek Quarry site would not change under the No Action Alternative. Mining, processing, and reclamation activities at the site would continue for up to 6 to 12 months under the alternative compared to a projected 25 years under the Proposed Action.

Mining and reclamation activities would continue to be consistent with applicable plans, as would the Proposed Action.

4.2.6 Traffic and Transportation

Under the No Action Alternative, current excavation, processing, and transport operations at the Super Creek Quarry would continue, unchanged, until limitations on the availability of on-site locations for waste placement force operations to shut down. It is estimated that operations could continue for up to 6 to 12 months without the acquisition of new placement areas. While operations remain active, traffic generated by the quarry operation would remain unchanged relative to current conditions. After the cessation of operations under the alternative, traffic would be limited to that generated by implementation of Reclamation Plan No. 137.

4.2.7 Vegetation

Under the No Action Alternative, existing mining activities would continue to affect nearby vegetation; however, expansion of activities into approximately 33.4 acres of land west of the current disturbance, as would occur under the Proposed Action, would not take place. The No Action Alternative would not result in any additional activities or disturbance of vegetation, including individual plant species and local natural communities.

4.2.8 Visual Resources

Under the No Action Alternative, Painted Hills would continue to mine the existing quarry under its approved BLM Plan of Operations and Reclamation Plan No. 137. As noted above, mining and processing operations would continue for approximately 6 to 12 months and would be limited to approximately 23.8 acres of the Super Creek Quarry site. With the cessation of mining activities, Reclamation Plan No. 137 would be implemented. The No Action Alternative, as described, would have relatively minor effects on current views of the project site. Views of exposed rock surfaces in the quarry area and views of lighter-colored tailings in the Northeast and East Tailings Slopes Waste Placement Areas from the four KOPs evaluated in Section 4.1.8 above would change little with the completion of ongoing mining activities. Over time, revegetation of the project site through implementation of site reclamation would reduce the color contrast between the quarry site and the surrounding undisturbed terrain.

As described in Section 4.1.8, above, the Proposed Action would flatten the top horizontal edge of the two peaks visible from KOP1. This would result in a weak to moderate change in the overall visual contrast form as viewed from KOP1. This change would not occur under the No Action Alternative.

4.2.9 Wastes, Hazardous or Solid

The No Action Alternative would result in no substantive changes in the transport, handling, or storage of hazardous or solid waste related to the Super Creek Quarry operation. This is identical to the Proposed Action except that the duration of waste-related activities would extend throughout the 25-year projected life of the Proposed Action.

4.2.10 Wildlife

Under the No Action Alternative, disturbance from existing mining activities would continue to potentially impact local wildlife species at the project location. Impacts on sensitive wildlife under the No Action Alternative would be similar in nature to those associated with the Proposed Action. However, direct disturbance of approximately 33.4 acres of land west of current mining activities would not occur. The No Action Alternative would not result in any additional activities or disturbance of wildlife.

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5 CUMULATIVE EFFECTS

5.1 Introduction

NEPA, as amended, requires an assessment of potential cumulative impacts. Federal regulations (40 CFR 1500 1508) define cumulative impacts as:

... the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individual minor but collectively significant actions taken place over a period of time (40 CFR 1508.7).

For the purpose of this EA-IS/MND, the cumulative impacts are the sum of all past, present, and reasonably foreseeable future actions resulting primarily from mining activities in Cumulative Effects Study Areas (CESAs) that could result from the implementation of the Proposed Action and the No Action Alternative. The purpose of the cumulative analysis in this EA-IS/MND is to evaluate the significance of the project's contributions to cumulative impacts.

As required under NEPA and the regulations implementing NEPA, this section addresses those cumulative effects on the environmental resources in the CESAs. The extent of the CESAs will vary by each resource, based on the geographic limits of that resource. As a result, the list of projects considered under the cumulative analysis may vary according to the resource being considered. In addition, the length of time for cumulative effects analysis will vary according to the duration of impacts from the Proposed Action on the particular resource.

Consistent with Section 6.8.3 of the BLM NEPA Handbook, the cumulative impacts analysis was accomplished through the following steps:

- Determine which issues identified for analysis may involve cumulative impact;
- Define the geographic scope of the CESAs for each issue that could have a cumulative impact;
- Define time frames, scenarios, and acreage estimates for cumulative impact analysis;
- Identify and quantify the location of possible specific impacts from the Proposed Action and judge the significance of these contributions to the overall impacts.

5.2 Issues with the Potential for Cumulative Impact

Impacts and environmental consequences of the Proposed Action and No Action Alternative were evaluated previously in Section 4 of this EA-IS/MND for the following environmental resources: Air Quality and Atmospheric Values; Cultural Resources; Drainage, Erosion, and Sediment; Geology, Soils, and Mineral Resources; Land Use; Traffic and Transportation; Vegetation; Visual Resources; Waste, Hazardous and Solid; and Wildlife. Based on the results of that evaluation, the incremental impacts of the Proposed Action on four resource areas warrant consideration of the potential cumulative impact of the Proposed Action. These issues are:

-
- Air Quality and Atmospheric Values;
 - Vegetation
 - Wildlife; and
 - Visual Resources

5.3 **Cumulative Effects Study Areas (CESAs)**

The following sections describe the resources that have the potential to be cumulatively impacted by the Proposed Action within the identified CESAs. The descriptions are based on the previous analysis of each environmental resource. The geographical areas considered for the analysis of cumulative effects vary in size and shape to reflect each evaluated environmental resource and the potential area of impact to each from the Proposed Action as determined through the analysis in Section 4. For this cumulative impact analysis, the CESA for air quality is the Riverside County portion of the South Coast Air Basin. The CESA for biological resources (vegetation and wildlife) is the Whitewater Canyon ACEC encompassing approximately 11,200 acres. The CESA for visual resources includes the four KOPs described in Section 4.1.8 and areas surrounding the KOPs from which unobstructed views of the project site are possible. An approximation of the extent of viewshed is roughly 2,000 to 3,000 acres, which is illustrated in Figure 4-2.

5.4 **Past and Present Actions**

Mineral Exploration and Mining

The BLM manages mineral exploration, mining, and reclamation on BLM-administered public lands in accordance with 43 CFR 3809 regulations and conducts mineral sales in accordance with 43 CFR 3600 regulations. The BLM database of mineral claims (LR2000) does not include any active claims in the immediate region. There are numerous closed placer and lode claims, however (five placer claims and nine lode claims in the same area). No data are available for these claims.⁸¹

The California State Geologist has defined the Coachella Valley as the Palm Springs Production-Consumption region as a 629-square-mile area that extends from San Geronio Pass on the west, to east and southeast to the Mecca Hills east of Indio. Based on OMR records, approximately 13 mines are currently approved to operate in this region.⁸² The closest active aggregate operations are approximately 4 miles southeast of the project site at Indian Avenue and I-10, and approximately 8 miles west in Cabazon. These two mines excavate alluvial deposits from flat areas within river floodplains. The two sites are not in the vicinity of the Proposed Action. There are several aggregate operations on BLM lands along Dillon Road, 25 miles east of the Proposed Action, and in the Mecca Hills, 37 miles southeast of the Proposed Action. There are no other known decorative rock operations in the region operated on either public or private lands.

⁸¹ Jeffrey Johnston, Geologist, P.G., C.E.G., U.S. Bureau of Land Management Palm Springs-South Coast Field Office.

⁸² California Department of Conservation Office of Mine Reclamation, AB 3098 List, April 1, 2014.
http://www.conservation.ca.gov/omr/SMARA%20Mines/ab_3098_list/Documents/April%202014%20AB%203098%20rev.pdf.

Alternative Energy Development

The area around the project site to the south, southeast, and southwest has been extensively developed with wind farms on a combination of private and federal lands. The BLM has established solar zones to facilitate solar energy production. There are no solar energy zones within the Coachella Valley. The closest zone (Riverside East) is approximately 70 miles east of the Proposed Action.

The BLM has authorized over 26,000 acres of wind development in the Desert Region.⁸³ Numerous wind energy projects are located on both public and private lands within the San Geronio Pass area, approximately 5 miles west and east of the Proposed Action.

5.5 Reasonable Foreseeable Future Actions

Mineral Exploration and Mining

There are no known pending mining projects on BLM land within the Coachella Valley region. Due to the environmentally sensitive areas in vicinity (where not developed with wind farms), the BLM does not anticipate future mining operations in the immediate area. It is possible that some of the existing operations elsewhere in the Coachella Valley could expand onto adjacent lands over time in order to maintain future resources; however, none of the existing mine sites would cumulatively add to the Proposed Action's potential impacts due to their distance from the project site and locations generally within alluvial fan deposits. There are no other known decorative rock mining projects pending within the area.

Alternative Energy Development

BLM is not aware of any future plans for wind farm expansions in the immediate area, and there are no known solar or wind applications for testing or development authorizations within the Coachella Valley region in the Palm Springs Field Office area.

5.6 Impact Analysis

Air Quality/Atmospheric Values and Greenhouse Gas Emissions

The South Coast Air Basin is designated as in extreme nonattainment of the national ambient air quality standards for ozone, PM₁₀, and PM_{2.5}, and maintenance for NO_x. The Basin is in nonattainment of the California ambient air quality standards for ozone, PM₁₀, and PM_{2.5}. Because the Basin has not met the federal and/or state standards for these pollutants, significant baseline cumulative impacts to air quality currently exist for ozone precursors (VOCs and NO_x), PM₁₀, and PM_{2.5}. The Proposed Action would not result in a net increase in pollutants. Also, the Proposed Action would not exceed the trigger criteria for potential air quality violations related to operation emissions, including ozone precursors, PM₁₀, and PM_{2.5}. Projects below the trigger criteria were determined not to substantially contribute to the potentially significant emissions impact that would result from cumulative development. Additionally, the Proposed Action would be consistent with regional air quality plans. Therefore, operation of the Proposed Action would

⁸³ U.S. Department of the Interior Bureau of Land Management. Approved Renewable Energy Projects.
http://www.blm.gov/ca/st/en/prog/energy/Approved_Projects.html.

not result in a cumulatively considerable net increase of any criteria pollutant for which the Basin is in nonattainment. Impacts would not be cumulatively considerable.

The analysis of GHG emissions presented in Section 4.1.1 is cumulative in nature, and no separate analysis is required.

Vegetation and Wildlife

The Proposed Action would result in disturbance of habitat that could contribute to potentially cumulative significant impacts on sensitive biological resources (vegetation and wildlife) in the region and, specifically, the Whitewater Canyon ACEC. However, implementation of the mitigation measures presented in Section 2.1.16, Environmental Protection Measures of this EA-IS/MND would reduce the overall contribution to cumulative biological resource impacts resulting from implementation of the project. Therefore, the Proposed Action is not expected to result in cumulative impacts.

Visual Resources

There are no reasonably foreseeable exploration, mining, or renewable energy projects pending within the viewsheds of the four KOPs evaluated in Section 4.1.8. It is reasonable to assume that additional wind energy projects and/or wind turbines may be established in the vicinity of the Proposed Action within areas currently permitted to operate wind turbines. However, the visual impacts from wind energy projects and a mining project are not similar or cumulative in nature.

The visual impact analysis in Section 4.1.8 (Visual Resources) concluded the Proposed Action would only produce a small, light-colored form set in the darker, tan-colored foothills and could be visible, but it would not attract attention due to the expanse of the viewshed and the distances from viewers to the project site. No processing facilities or equipment would be visible from these distances, unlike the visual impacts from wind energy projects, which are principally related to the height and number of the wind turbines.

The Proposed Action would create a moderate contrast for KOP1 (directly west of the site within Whitewater Canyon). This would be mitigated by rounding the tops of the rock extraction slopes. The proposed design of the Proposed Action (revegetation, termination of tailings deposited on the East Tailings Slopes, lowering the top of the tailings slope, and rock fill of erosion features) and lack of any reasonably foreseeable actions in the area that would add to cumulative impacts would not adversely affect cumulative visual impacts in the region.

6 CEQA INITIAL STUDY CHECKLIST

6.1 Introduction

This section addresses the environmental review requirements specific to CEQA that are addressed in this EA-IS/MND. As described in Section 1 of this EA-IS/MND, the proposed expansion of the Super Creek Quarry will require BLM approval and therefore must meet the requirements for environmental review under NEPA. The amended reclamation plan is subject to approval by the SMGB and is subject to review as required by CEQA. This EA-IS/MND has been prepared with the BLM and SMGB serving as federal and state lead agencies, respectively.

This EA-IS/MND complies with the California Environmental Quality Act of 1970 (as amended) (California Public Resources Code Sections 21050 et seq.) and the State CEQA Guidelines. This EA-IS/MND addresses the potential direct, indirect, and cumulative impacts of implementing the Super Creek Quarry expansion and the proposed amendment to Reclamation Plan No. 137.

6.2 Initial Study Contents

In addition to each of the preceding sections of this EA-IS/MND (Sections 1 through 5), the Initial Study element of this joint document includes:

- A description of legal authority of the lead agency under CEQA;
- Requirements for public review;
- Environmental Checklist; and
- Determination of potential impact.

6.3 Legal Authority

This EA-IS/MND for the Proposed Action has been prepared in accordance with CEQA Guidelines Section 15063(c), which lists the following purposes of an initial study:

- 1) Provide the lead agency with information to use as the basis for deciding whether to prepare an EIR or negative declaration;
- 2) Enable an applicant or lead agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a negative declaration;
- 3) Assist in the preparation of an EIR, if one is required;
- 4) Facilitate environmental assessment early in the design of a project;
- 5) Provide documentation of the factual basis for the finding in a negative declaration that a project will not have a significant effect on the environment;
- 6) Eliminate unnecessary EIRs; and
- 7) Determine whether a previously prepared EIR could be used with the project.

According to CEQA Guidelines Section 15063(b) (Results):

- 1) If the agency determines that there is substantial evidence that any aspect of the project, either individually or cumulatively, may cause a significant effect on the environment, regardless of whether the overall effect of the project is adverse or beneficial, the Lead Agency shall do one of the following:
 - (A) Prepare an EIR, or
 - (B) Use a previously prepared EIR which the lead agency determines would adequately analyze the project at hand, or
 - (C) Determine, pursuant to a program EIR, tiering, or another appropriate process, which of a project's effects were adequately examined by an earlier EIR or negative declaration.

6.4 **Public Review**

In accordance with CEQA and the CEQA Guidelines, a 30-day public review period for this EA-IS/MND commenced on July 1, 2014, and will conclude on July 30, 2014. This EA-IS/MND has specifically been distributed to interested or involved public agencies, organizations, and private individuals for review. In addition, the EA-IS/MND is available for general public review at:

State Mining and Geology Board
801 K Street, Suite 2015
Sacramento, CA 95814-3528

U.S. Department of the Interior
Bureau of Land Management
Palm Springs-South Coast Field Office
1201 Bird Center Drive
Palm Springs, CA 92262

Website:
<http://www.conservation.ca.gov/smgb/Pages/Index.aspx>

Website:
http://www.blm.gov/ca/st/en/fo/palmsprings/national_environmental.html

In reviewing this EA-IS/MND, affected public agencies and interested members of the public should focus on the sufficiency of the document in identifying and analyzing potential project impacts on the environment. Comments on this EA-IS/MND should be submitted in writing prior to the end of the 30-day public review period and must be postmarked by July 30, 2014. Please submit written comments to:

Will Arcand, Senior Engineering Geologist
State Mining and Geology Board
801 K Street, Suite 2015
Sacramento, CA 95814-3528
Will.Arcand@conservation.ca.gov

Jeffrey Johnston, Field Office Geologist
U.S. Department of the Interior
Bureau of Land Management
Palm Springs-South Coast Field Office
1201 Bird Center Drive
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6.5 Environmental Checklist

Using information and analysis contained in Sections 3 and 4 of this EA-IS/MND, an “environmental checklist” was completed using the format of Appendix G of the State CEQA Guidelines. The checklist is included as Appendix C of this EA-IS/MND and identifies environmental issue areas that could be affected by the Proposed Action and lists the determination of whether the project’s effects on those areas are significant, less than significant with mitigation, less than significant, or of no impact.

6.6 Determination

Based on the information and analysis presented in Sections 3 and 4 of this EA-IS/MND and the Environmental Checklist, it was determined that, with mitigation measures incorporated into the Proposed Action/proposed project, the action would not result in a potentially significant impact in any of the following environmental issue areas:

- | | | |
|---|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture/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 |

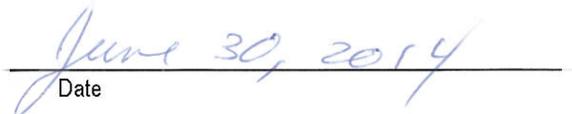
On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that 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.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a “potentially significant impact” or “less than 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.
- I find that 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.



Signature



Date

Stephen M. Testa

Name

Executive Officer

Title

6.7 Mitigation Measures

Aesthetics

MM-AES-1 At the completion of mining operations, the tops of decorative rock extraction area slopes shall be rounded to decrease the contrasting edges of the disturbance.

Biological Resources

MM-BIO-1 Desert Tortoise. The following actions should be implemented prior to and during expansion activities.

- An authorized biologist shall conduct a preconstruction desert tortoise clearance survey on undisturbed areas no more than 14 days prior to commencement of project activities within desert tortoise habitat. Any desert tortoise burrows within 50 yards of the proposed expansion area should be flagged for avoidance. If a desert tortoise is observed within 50 yards of the proposed expansion area, the BLM shall be contacted to determine whether additional protection measures are required.
- If burrows are found in the project area and avoidance zones marked with flags, all work activities shall be restricted to the limits of the flagged area.
- An authorized biologist shall conduct a desert tortoise educational program for personnel at the project site; the program should discuss measures to protect desert tortoise on-site.
- Workers shall be required to check for desert tortoise under all heavy equipment and vehicles prior to moving them.
- No firearms, dogs, or other pets shall be allowed in desert tortoise habitat within the project area.
- All trash and food items shall be promptly contained within closed, common raven-proofed containers and will be removed daily from the project site to reduce the attractiveness of the area to common ravens (*Corvus corax*).
- An on-call authorized desert tortoise biologist shall be employed to assist the site manager should any tortoise issues arise when previously undisturbed lands are cleared for project purposes.

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- An on-call authorized desert tortoise biologist shall be employed to assist the site manager should any tortoise issues arise when previously undisturbed lands are cleared for project purposes.

MM-BIO-2 Burrowing Owl. To reduce potential effects on burrowing owl, mitigation measures and survey protocols outlined in the CDFW (2012) Staff Report on Burrowing Owl Mitigation shall be implemented by a qualified biologist. Mitigation methods can include actions to avoid take of owls or owl nests; perform preconstruction surveys; conduct site surveillance; minimize disturbance; establish restriction or avoidance buffers around occupied burrows; exclude and close abandoned burrows; translocate individuals; provide permanently protected replacement habitat; install artificial burrows; and design a mitigation monitoring and reporting plan. Ultimately, mitigation for this species should be roughly proportional to the level of impact. The authorized biologist shall conduct preconstruction surveys following CDFW protocols and establish avoidance areas for any active burrows found within and adjacent to the project area. If burrowing owls are documented on-site, the biologist shall consult with the BLM regarding possible additional restrictions that would be necessary for project implementation.

MM-BIO-3 Raptors and Migratory Birds, Including Le Conte's Thrasher. A survey for active nests shall be conducted prior to the onset of project activities on any lands not previously disturbed or left undisturbed for six months. If project activities are planned to begin during the nesting season for local avian species (typically March 15 to September 15), a qualified biologist shall conduct a focused survey for active nests of raptors and migratory birds, with special attention given to areas likely to support Le Conte's thrasher, within and in the vicinity (no less than 100 feet outside project boundaries, where possible) of disturbance areas no more than three days prior to the onset of activity. If an active nest is located during a survey, the USFWS and/or CDFW (depending on the regulatory status of the species) shall be notified regarding the status of the nest. Furthermore, project activities shall be restricted as necessary to avoid disturbance of the nest until it is abandoned or resource agencies deem the potential for abandonment (or loss of individuals) to be minimal. Restrictions may include establishment of exclusion zones (no ingress of personnel or equipment at a minimum radius, typically 100 feet or greater around the nest) or alteration of the project schedule. If no active nests are found during the survey, project activities may proceed without further restrictions (related to birds). No action is necessary if project activity will commence outside the breeding season (generally September 16 through March 14).

MM-BIO-4 Pre-Ground Disturbance Special-Status Plant Surveys for New Areas. A qualified botanist shall be employed to conduct a focused survey for special-status plant species in the quarry expansion and new waste placement areas no more than 30 days prior to the onset of mining and/or reclamation activities within any previously undisturbed lands. Surveys shall also be conducted on any lands left undisturbed for six months prior to any re-disturbance or further mining and/or reclamation activities. If

sensitive plants (other than triple-ribbed milk-vetch) are located during preconstruction surveys, the USFWS and/or CDFW (based on the species regulatory status) shall be notified regarding appropriate avoidance or disturbance minimization measures and allowed to transplant the species, if appropriate. Project activities shall be restricted based on USFWS and/or CDFW guidance. Restrictions may include establishment of avoidance buffer zones, installation of silt fences, or alteration of the construction schedule.

If triple-ribbed milk-vetch is found on the site during any survey, the BLM and USFWS shall coordinate on the appropriate actions to be taken, based on the number of plants and other circumstances involved. Formal consultation may be required unless plant disturbance can be avoided by reconfiguring mining and reclamation activities on the site.

MM-BIO-5 Jurisdictional Waters of the U.S. The jurisdictional delineation for the project conducted on May 30–31, 2013, by the Lilburn Corporation shall be submitted to the U.S. Army Corps of Engineers (USACE) for official verification. Based on the amount of jurisdictional waters to be impacted by project implementation, mitigation shall be employed to achieve no net loss of waters and the appropriate permits (e.g., USACE permit, RWQCB Water Quality Certification, and CDFW Lake or Streambed Alteration Agreement) shall be obtained prior to any on-site project disturbance of jurisdictional waters.

All permit conditions, best management practices, and other measures (established by the permitting authorities) shall be employed to minimize and compensate for potential impact to jurisdictional waters. Any required mitigation plans shall be completed and approved by the regulatory agencies prior to the onset of activities authorized by this project. Mitigation shall also be noted on design plans, as appropriate. At minimum, measures shall include restoration or enhancement of an area of equivalent size to the disturbance area within the same watershed that shall be protected in perpetuity from anthropogenic disturbance; implementation of a stormwater pollution prevention plan for the duration of mining activities to ensure the project does not affect the water quality of nearby drainages; and include a description, timetable for completion, and maintenance schedule of planned sedimentation and erosion control improvements in the applicable permits applications so these actions are completed with regulatory oversight to their satisfaction.

Cultural Resources

MM-CR-1 Consultation Prior to Ground Disturbance for New Areas. Prior to ground disturbance in the quarry expansion areas or placement of tailings in new permanent waste placement areas authorized by this project, the BLM shall complete consultation with local Native American representatives, including any site visits, if requested, and Section 106 consultation, as appropriate.

MM-CR-2 Native American Monitoring During Ground Disturbance. A Native American monitor shall be present during initial ground-disturbing activities to ensure that resources will not be directly or indirectly impacted in any areas of new excavation. Monitoring may be reduced or potentially eliminated if the Native American monitor determines that the potential for impacts has been eliminated.

MM-CR-3 Accidental Discovery of Cultural Resources. It is always possible that ground-disturbing activities may uncover presently obscured or buried and previously unknown cultural resources. In the event that buried cultural resources are discovered during construction, such resources could be damaged or destroyed, resulting in adverse effects to cultural resources. If subsurface cultural resources are encountered during construction, if evidence of an archaeological site or if other suspected historic resources are encountered, it is recommended that all ground-disturbing activity cease within 100 feet of the resource. A professional archaeologist or BLM Cultural Resources Specialist shall be consulted to assess the find, and to determine whether the resource requires further study. This assessment process may require consultation with the State Historic Preservation Officer (SHPO), tribal groups, and other interested parties. The qualified archeological personnel shall assist the Lead Agency by generating measures to protect the discovered resources, which may include input from interested parties. Any previously undiscovered resources found during project implementation should be recorded on appropriate DPR forms and evaluated for significance under all applicable regulatory criteria.

In addition, reasonable efforts to avoid, minimize, or mitigate adverse effects on the resources will be determined by the BLM. Such efforts will be communicated by the BLM to the SHPO, Native American tribes with concerns about the property, and the Advisory Council on Historic Preservation (ACHP) within 48 hours in compliance with 36 CFR 800.13(b)(3).

MM-CR-4 Accidental Discovery of Human Remains. In the event of accidental discovery or recognition of any human remains, all ground-disturbing activities should cease within 100 feet of the remains. California State Health and Safety Code Section 7050.5 dictates that no further disturbance shall occur until the county coroner has made the necessary findings as to origin and disposition. If the remains are determined by the county coroner to be Native American and not subject to their authority, and said remains are found on BLM lands, the BLM shall be notified within 24 hours. If the remains are found to be Native American as defined by the Native American Graves Protection and Repatriation Act (NAGPRA) (Public Law 101-601), the BLM shall take the lead in the treatment of said remains and any associated objects by implementing the appropriate agency procedures for NAGPRA compliance.

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7 CONSULTATION AND PUBLIC INPUT

7.1 List of Preparers

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7.2 Persons, Groups, and Agencies Contacted

Federal Agencies

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State Agencies

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Native American Tribes

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9 LIST OF ABBREVIATIONS

AB	Assembly Bill
ACEC	Area of Critical Environmental Concern
ACHP	Advisory Council on Historic Preservation
amsl	above mean sea level
APE	Area of Potential Effect
AQMP	Air Quality Management Plan
AST	aboveground storage tank
Basin	South Coast Air Basin
bcy	banked cubic yard
bgs	below ground surface
BLM	Bureau of Land Management
BMP	best management practice
CARB	California Air Resources Board
CDCA	California Desert Conservation Area
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	Cumulative Effects Study Area
CFC	chlorofluorocarbon
CFR	Code of Federal Regulations
CH ₄	methane
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂	carbon dioxide
CUPA	Certified Unified Program Agency
CVAG	Coachella Valley Association of Governments
CVMSHCP	Coachella Valley Multiple Species Habitat Conservation Plan
CWA	Clean Water Act
cy	cubic yard
°F	degrees Fahrenheit
dba	decibels
EA-IS/MND	Environmental Assessment and Initial Study/Mitigated Negative Declaration
EIC	Eastern Information Center
EO	Executive Order
ESA	Endangered Species Act
FACE	financial assurance cost estimate
FLPMA	Federal Land Policy and Management Act of 1976
FTA	Federal Transit Administration
G-E-M	Geology, Energy, and Mineral
GHG	greenhouse gas

HFRA	Healthy Forest Restoration Act
I-E	Industrial Energy-Related
I-10	Interstate 10
KOP	key observation point
lcy	loose cubic yards
L _{eq}	equivalent noise level
MBTA	Migratory Bird Treaty Act
Mining Law	General Mining Law of 1872
MTCO _{2e}	metric ton of carbon dioxide equivalent
MWD	Metropolitan Water District
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act of 1966
NO ₂	nitrogen dioxide
NO _x	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
N ₂ O	nitrous oxide
O&G	oil and grease
OMR	Office of Mine Reclamation
OS/MR	Open Space/Mountain Reserve
O ₃	ozone
Painted Hills	Painted Hills Mining Company
Pb	lead
PM ₁₀	suspended particulates
PM _{2.5}	fine particulates
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SLF	Sacred Lands File
SMARA	California Surface Mining and Reclamation Act of 1975
SMGB	State Mining and Geology Board
SO ₂	sulfur dioxide
SO ₄	sulfates
SO _x	sulfur oxide
SPCC	Spill Prevention, Control, and Countermeasure Plan
SWPPP	stormwater pollution prevention plan

TMDLs	total maximum daily loads
TOC	total organic carbon
tpy	tons per year
U.S.	United States
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VMT	vehicle miles traveled
VOC	volatile organic compound

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