

ALAMEDA COUNTY, CALIFORNIA

NILES CANYON QUARRY (SMP-34)

# **RECLAMATION PLAN**

*CA MINE ID 91-01-0003*

**MAY** | 2019

**Lead Agency:**

Alameda County Neighborhood Preservation and Sustainability Department

**Applicant/Operator:**

SRDC, Inc.

ALAMEDA COUNTY, CALIFORNIA

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**Lead Agency:**

Alameda County Neighborhood Preservation and Sustainability Department  
224 W. Winton Avenue, Suite 110, Hayward, CA 94544

**Applicant/Operator:**

SRDC, Inc.  
6639 Smith Avenue, Newark, CA 94560

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## 1. SUMMARY

The following subsections provide an overview of the site and reclamation plan. At the end of this document is an “Index to Required Content,” which provides the location in this document for specific requirements, practices, and standards for reclamation plans.

### 1.1 Purpose and Objectives

The purpose of this reclamation plan amendment to the SMP-34 reclamation plan is to modify current reclamation responsibilities caused by current site conditions that make the approved reclamation plan infeasible.

This reclamation plan includes actions designed to meet objectives for implementing physical reclamation of surfaces disturbed by mining activities. Examples of these objectives are listed below:

- Provide for long-term stability of slopes.
- Prevent wind and water erosion by stabilizing the soil surface through proper grading and drainage.
- Remove anthropogenic changes in the seasonal creek channel and reconstruct the channel to provide habitat connectivity.
- Implement a revegetation program designed to establish self-sustaining cover.
- Implement reclamation activities while preventing impacts to special-status plants and wildlife, surface water, and groundwater.

### 1.2 Site Background and Existing Use

The Niles Canyon Quarry is located approximately 1 mile west of Sunol, on the north side of State Route (SR) 84 (Niles Canyon Road) at 5550 Niles Canyon Road. The site location is shown on Figure 1, “Regional Location,” and Figure 2, “Site Location”). SRDC purchased the Niles Canyon Quarry with the intention of operating a hillside quarry to harvest clay, shale, and natural rock for individual sales and/or for use in mixing with crushed concrete to make Class II or Class III base rock. The native materials, when mixed with the imported recycled material, did not meet the specification desired; therefore, the operation was discontinued (see Figure 3, “Existing Conditions Aerial Photograph”).

### 1.3 Subsequent Use and Approach

The reclaimed land use plan for the quarry following mining is agriculture. The surfaces disturbed by mining will generally be graded and/or backfilled to provide slope stability and erosion control. The seasonal creek channel will be restored by removing fill, culverts, and other human-made features constructed in association with quarry operations and reconstructing the stream channel to provide habitat connectivity, slope stability, and erosion control. Disturbed surfaces will be vegetated with plants native to regional upland (i.e., grasslands and chaparral) and wetland habitats (i.e., upper riparian, lower riparian, and freshwater emergent wetlands). The success of revegetation will be monitored after completion of final reclamation to ensure successful establishment and erosion control.

## 2. INTRODUCTION

This reclamation plan for the quarry has been prepared in accordance with the requirements of SMARA, found in California Public Resources Code (PRC) Section 2710 et seq., CCR Title 14 Section 3500 et seq.,

and the Alameda County Surface Mining Ordinance. This 2018 amended reclamation plan supersedes the 1996 approved reclamation plan.

### 3. SITE DESCRIPTION

#### 3.1 Contact Information

<b>Owner of Property:</b>	SRDC, Inc.
<b>Owner of Mineral Rights:</b>	SRDC, Inc.
<b>Street Address or PO Box:</b>	6639 Smith Avenue
<b>City, State, Zip Code:</b>	Newark, CA 94560
<b>Telephone Number:</b>	(650) 961-2742
<b>Parcels:</b>	096-0115-2-4; 096-0125-6-1, 6-2, and 6-3

<b>Mine Operator:</b>	SRDC, Inc.
<b>Street Address or PO Box:</b>	6639 Smith Avenue
<b>City, State, Zip Code:</b>	Newark, CA 94560
<b>Telephone Number:</b>	(650) 961-2742
<b>Contact Persons:</b>	Tom Bylund

#### 3.2 Reclamation Responsibility

A statement for responsibility to complete reclamation in accordance with this plan is provided by the current operator in Appendix A, "Statement of Responsibility."

#### 3.3 Location, Size, and Legal Description

The Niles Canyon Quarry is located approximately 1 mile west of Sunol, on the north side of SR 84 (Niles Canyon Road) at 5550 Niles Canyon Road. Access to the site is off of Niles Canyon Road on a gated, paved road. The site location is shown on Figures 1 and 2.

The property consists of four parcels owned by SRDC totaling approximately 182.4 acres. The location is identified as follows:

- **Alameda County Assessor's Parcel Numbers:** 96-115-2-4; 96-125-6-1, 6-2, and 6-3
- **U.S. Geological Survey Township and Range:** Portions of Sections 7 and 12, Township 4 South, Range 1 East of the Mount Diablo Base and Meridian
- **Latitude and Longitude:** 37.597777° and -121.919352° at site entrance

The legal description and parcel maps of the property under ownership are provided in Appendix B, "Mine Site Legal Description." The quarry is bordered to the southwest by Niles Canyon Railway Brightside Maintenance Yard, the maintenance and storage facility for the Niles Canyon Railway. Southwest of the train yard is Niles Canyon Road, Alameda Creek, train tracks, and a steep hillside covered with trees. The remaining three sides of the site are bordered by open space and grazing lands and agricultural and low-density residential buildings.

### 3.4 Site Features, Including Utilities and Easements

The lower pad is partially paved and includes a caretaker's residence, maintenance building, fire/water supply tanks, and a detention pond. A paved road leads to the upper pad, which had been the location for the mining and crushing operations.

The following utilities are on- site:

- **Power:** Line power is provided to the caretakers residence and maintenance building.
- **Water:** Water is supplied by water tanks and a detention pond.
- **Sewage:** Not available. Portable facilities are used as necessary.

Reclamation activities will not affect public utilities facilities or service systems. No additional extensions of public utilities or alterations to existing utility service will be necessary to carry out reclamation activities identified in this plan.

### 3.5 Existing and Allowed Land Uses

#### 3.5.1 Existing Uses

Mining no longer occurs on-site. Land use on-site and nomenclature of the site features are referenced in this document in Figure 3.

#### 3.5.2 Allowed Uses

The property is zoned A-Agricultural and has a designation of Larger Parcel Agricultural in the *East County Area Plan* (Alameda County 2016). Permitted uses in this zone are found in Alameda County Zoning Ordinance Chapter 17.06, A Districts) and the *East County Area Plan* as related to the Save Agriculture and Open Space Lands Initiative (Measure D, effective December 22, 2000).

The California Department of Conservation (DOC) designated this area as Grazing Land, which is defined as "land on which the existing vegetation is suited to the grazing of livestock" (FMMP 2014). Mining and reclamation will not occur on soils designated as Prime Farmland by the California Department of Conservation's Farmland Mapping and Monitoring Program. Therefore requirements under CCR Section 3707 do not apply.

The DOC California Geological Survey has designated a portion of the site as Mineral Resource Zone (MRZ) 4. Lands designated as MRZ 4 are areas where geologic information does not rule out either the presence or absence of mineral resources.

### 3.6 Soils

The lithology of the southwestern portion of the Project area is primarily composed of Quaternary surficial deposits comprised of clay, silt, sand, gravels, and landslide rubble derived from rocks upslope. The northwestern portion of the Project area consists of Livermore gravels which include Pliocene to Pleistocene conglomerates, shale, and sandstone with minor occurrences of greywacke and siltstone (Graymer et al. 1992). Soil mantled hillslopes in the Project area are comprised of Los Osos and Millsholm soils, Rincon clay, and Yolo loam. Los Osos and Millsholm soils include silt loam and silty clay derived from residuum weathered from sandstone and shale and are well drained to somewhat excessively drained soils. Rincon clay includes clay loam, sandy clay, and stratified sandy loam to clay loam that has

been derived from sandstones and shales and is well drained. Yolo loam includes very fine to fine sand and sandy loam derived from Franciscan metamorphic and sedimentary rock. Reworked quarry fill on-site includes well-sorted grey shale and mudstone sediments ranging from 2–16 millimeters, with sparse (less than 20 percent) coarser sediment.

#### **4. MINING**

The Permittees' annual report has determined that the site is closed, with no intent to reopen; thus, a detailed mining plan is not relevant to this reclamation plan.

#### **5. RECLAMATION**

##### **5.1 Reclamation Plan and Surface Treatment**

###### **5.1.1 Surface Treatment for Second Use**

The anticipated second land use is for agricultural use of the upper and lower pads and open space within the riparian corridor. The plan for reclamation is shown in Appendix C, "Reclamation Plan Map." In general, slopes in the upper pad, lower pad, stream channel, and slope east of the stream channel will be graded and filled to conform with the surrounding topography, provide slope stability, and control erosion as shown in Appendix D, "Reclamation Grading Plans," and Appendix E, "30% Basis of Design Report." Fill and combination fill and cut slopes will not exceed 2H:1V. In the stream channel, rock ramps and plunge pools will be placed at approximately 30-foot increments to protect the channel and banks from erosion.

As described in detail in Appendix F, "Revegetation Plan," all areas disturbed by mining operations, including the upper pad, lower pad, outslope road, slope repair, and altered riparian corridor (upper channel, middle channel, and lower channel) are subject to revegetation actions detailed in this plan (see Appendix F, Figure 1). In addition, all areas subject to geotechnical repairs will be seeded. All recommended plant species included in the revegetation plan are native and consistent with the site's end use.

###### **5.1.2 Surfaces to Remain**

The road from the entrance to the lower yard and up to the upper pad is paved and will remain for site access and fire protection (See Figure 3). One hillside road (Loop Road; see Figure 3), does not serve a function and will be stripped of any road-base materials, regraded, resoiled, and revegetated. See Section 5.9, "Structure and Equipment Storage and Removal," for information on structures and equipment to remain on-site.

##### **5.2 Geology and Geotechnical Considerations**

The following subsections provide an overview of the existing geology and the geotechnical considerations related to reclamation of disturbed surfaces on-site.

###### **5.2.1 Geology**

Gilpin Geosciences, Inc. performed a geotechnical review of the site and vicinity. A summary of the results are provided below and in Appendix G, "June 12, 2017, Geotechnical and Geologic Evaluation." See Appendix A of this geotechnical and geologic evaluation for further details, including the figures and citations referenced in this subsection.



The site is in the Coast Ranges geomorphic province that is characterized by northwest-southeast trending valleys and ridges. These are defined by folds and faults that resulted from the collision of the Farallon and North American plates and subsequent shearing along the San Andreas Fault. Bedrock in the region primarily comprises Lower Cretaceous (about 160 to 100 million years ago) attributed to the Niles Canyon or Chico Formation rocks consisting of interbedded sandstone and shale. Subsequent mapping mapped the same units as Pacheco Formation micaceous shale and minor sandstone bedrock. More recent mapping leaves the sedimentary units at the site unnamed (Appendix F, Figure 2a, "Regional Geology Map"). The bedrock in the site vicinity is overlain by Late Tertiary to Quaternary (3 million years ago to recent) Livermore Gravels, landslide deposits and various ages of alluvium deposited along the through flowing creeks.

Although a dormant landslide is mapped at the northeastern corner of the site on the Landslide Inventory Map, Figure 2b, "Alquist Priolo Special Studies Zone Map" (California Geologic Survey 2011) (see Appendix G), no landslides are mapped in the quarried areas of the site. A large dormant landslide complex is mapped to the west of the site as part of the landslide inventory.

### **5.2.2 Source and Disposition of Fill Materials**

#### **Earthwork Materials**

As shown in Appendix D, the reclamation plan proposes to fill the upper pad area with approximately 176,000 cubic yards (cu. yd.) of material to re-create a hillside consistent with the surrounding topography and address identified slope stability concerns. Fill material will be imported from construction projects in the surrounding region. Upper pad fill activities are estimated to take approximately 3 years to complete.

Appendix E, Sheet 1 provides earthwork estimates for the streambed restoration materials available and needed:

<b>Cut:</b>	18,000 cu. yd.
<b>Fill:</b>	900 cu. yd. on-site
<b>Import:</b>	750 cu. yd. 1–3 tons of riprap rock
	250 cu. yd. ½–1 tons of riprap rock
	100 cu. yd. engineered streambed material

#### **Topsoil**

The amount of topsoil needed to cover revegetation areas to a depth of 4 inches (6,000 cu. yd.) is not available on-site and suitable material will need to be imported (Appendix F).

Topsoil suitable for revegetation will be salvaged from areas planned for regrading if encountered. Topsoil will not be stripped when saturated or during the rainy winter season to minimize stockpile compaction and allow gas exchange between the atmosphere and microorganisms in the soil. Available topsoil will be removed and stockpiled along the margins of the work area for later use during reclamation of slopes.

### **Criteria for Imported Soils**

Imported soil will meet site-specific acceptance criteria for placement on-site. The site-specific acceptance criteria must meet the requirements of regulatory agencies and will be based on the following guidelines:

1. California Environmental Protection Agency Department of Toxic Substances Control (DTSC) Information Advisory on Clean Imported Fill Material guidance document (Appendix H, "DTSC Imported Fill Guidelines") and
2. constituents of concern limits established via the San Francisco Bay RWQCB environmental screening levels and California Human Health Screening Levels (to establish whether the material is considered a "designated waste" under the California Water Code, in which case it would not meet the site's acceptance criteria).

Acceptance of soil will be determined for each individual source location (e.g., construction project), and all soil imported to the site will be subject to testing and quality controls to ensure it meets the site's site-specific acceptance criteria.

### **5.2.3 Grading, Drainage, and Erosion Control**

CCR Section 3706(d) requires erosion-control methods sufficient for a 20-year, 1-hour intensity return frequency interval (or intensity duration frequency) storm event. See Appendix D for grading details and associated erosion control measures during slope fill reclamation activities. Appendix E provides that areas to be graded will be cleared of all vegetation, including roots and other unsuitable material for a structural fill, then scarified to a depth of 6 inches prior to placing of any fill. Areas with existing slopes that are to receive fill material will be keyed and benched. Slopes over 3 feet in vertical height shall be planted with approved perennial or treated with equally approved erosion control measures before final inspection. Excess soil and rubble will be removed from the site. Best management practices for construction activities will be applied as detailed in Appendix E (Sheet 1).

### **5.2.4 Geotechnical Considerations (Closure Topography, Slope Stability, Compaction)**

#### **Slope Stability**

On June 12, 2017, Rockridge Geotechnical provided a geotechnical and engineering geologic evaluation that addressed the SMARA and County SMO requirements of the slope stability and landslide hazards at the Niles Canyon Quarry (see Appendix G). In summary, slopes inclined 1.85H:1V or flatter will be stable under static and seismic conditions. Slopes inclined at 1.5H:1V can be considered as stable under static conditions for agricultural use.

Cut slopes will not exceed a grade of 1.5H:1V. Fill and combination fill and cut slopes shall not exceed 2H:1V. (See Appendices D and E.)

#### **Compacted Surfaces**

As described in Appendix E, fill material shall be spread in lifts not exceeding 6 inches in compacted thickness, moistened or dried as necessary to near optimum moisture content, and compacted by an approved method. Fill material shall be compacted to a minimum of 90 percent. Maximum density will be as determined by 1957 ASTM D-1557-91 modified proctor (AASHTO) test or similar approved methods.

### **5.3 Resoiling**

A layer of 4-inch-deep topsoil suitable for revegetation will be applied to facilitate revegetation of recontoured material as specified Appendix F. Upon completion of fill and stream restoration activities the soil will be tested to determine the appropriate soil amendment necessary to ensure revegetation success.

#### **5.3.1 Stockpiles**

Stockpiles will be placed along the margins of the work areas. Topsoil will be stockpiled separately and clearly labeled. BMPs for stockpiles are provided in the attached design appendices (Appendices E and F). These BMPs are designed to prevent erosion, fugitive dust, and surface water contamination and protect sensitive habitat.

#### **5.3.2 Soil Amendments**

Soil conditions are not likely to limit the establishment of vegetation. See Section 2.1 of Appendix F for a description of the soils on-site. Upon completion of fill and stream restoration activities the soil will be tested to determine the appropriate soil amendment (e.g. fertilizer, mulch, compost) necessary to ensure revegetation success.

#### **5.3.3 Site Preparation**

Per Appendix F, Section 4.1.3, after grading and construction activities have been completed, planting areas will be prepared, including fine (i.e., hand) grading of the planting surface, placement of planting soil (i.e., salvaged or imported topsoil), and soil loosening and/or incorporation of soil amendments if deemed necessary. If broadcast seeding used, soil should be disked 1–2 inches deep. Where necessary, erosion-control netting will also be installed.

### **5.4 Test Plots**

No mining is occurring on-site and reclamation activities will begin immediately upon approval of this reclamation plan; thus, no test plots are planned. A site-specific revegetation plan is included in Appendix F. This revegetation plan includes two site assessments that document site soils, habitat types, and invasive plant species. The recommendations in the revegetation plan are based on this site-specific analysis and the expertise of Stillwater Sciences. In addition, as described in detail in Section 5.5, a robust 5-year monitoring plan based on quantitative performance standards is proposed. Based on site-specific data regarding the species to be planted and Stillwater's expertise with the species to be planted, SRDC requests that Alameda County waive the requirement to conduct test plots as provided in Section 3705(b) of the SMARA regulations.

### **5.5 Revegetation**

Stillwater Sciences has prepared a revegetation plan, which is attached as Appendix F. The plan provides a soil overview and existing and planned habitat types. The lithology of the southwestern portion of the project site is primarily Quaternary surficial deposits comprising clay, silt, sand, gravels, and landslide rubble from the rocks upslope. The northwestern portion of the project site consists of Livermore gravels, which include Pliocene to Pleistocene conglomerates, shale, and sandstone with minor occurrences of greywacke and siltstone. The soil mantled hillslopes on the project site comprise Los Osos and Millsholm soils, Rincon clay, and Yolo loam.

The existing habitat on-site is dominated by ruderal herbaceous vegetation and includes chaparral, coyote brush, oak woodland, and ornamental plantings in upland areas, and emergent wetland, oak/riparian forest, and riparian scrub along the riparian corridor and surrounding human-made basins.

The existing riparian forest areas, particularly existing trees, will be protected from construction activities. The planned habitat types for the revegetated areas include upland habitats (i.e., grasslands and chaparral) and wetland habitats (i.e., upper riparian, lower riparian, and freshwater emergent wetlands).

Appendix F, Table 3, "Proposed planting plan for the Project area," provides a list of species and whether seed or container plantings will be used. The revegetation plan describes which plant species will be used in which habitat (Section 3.2, "Planned Habitat Types"). These habitat types include species that are native to the San Francisco Bay Area subregion of the Central Western California region within the California Floristic Province, many of which are already documented within the project and are known to be easy to establish, have relatively high rates of survival, and are commercially available. Plant species also have been selected that are expected to thrive in the soils documented on-site.

Appendix F, Section 4, "Implementation Activities," provides details on preconstruction activities, plant installation, timing, maintenance monitoring, and irrigation. These details are summarized in the following subsections.

#### **5.5.1 Revegetation Protection Measures**

Appendix E, Sheet 18, provides plans for plant protection. All trees in the construction area not specifically designated for removal will be preserved and protected with high visibility fence. Fencing directions and drawings are provided. Appendix D, Sheet 2, also provides tree protection directions. Directions and drawings for staking planted trees are provided. Protection measures will be maintained until revegetation efforts are successfully completed.

#### **5.5.2 Weed Abatement**

See Appendix F, Section 4.1.1, for details on managing invasive plants before restoration construction activities begin and Appendix F, Section 4.5.2, for details on managing invasive plants after vegetation has been planted. In summary, during preconstruction, targeted invasive plants will be removed and maintained using a combination of mechanical (e.g., mowing or pruning) and chemical (i.e., herbicide application) methods. Monitoring of the site will occur in early spring (February/March) and again in the fall to determine the appropriate time to mow or plan for herbicide applications.

#### **5.5.3 Revegetation Success Criteria**

Appendix F provides the performance standards designed to ensure revegetation goals are met and to have self-sustaining plant communities by the end of a 5-year monitoring period. The following tables (Tables 1, "Revegetation Design Targets by Habitat Type," and 2, "Summary of Interim and Final Performance Goals") provide a summary of these performance standards (see Appendix F for additional details):

**TABLE 1**  
**REVEGETATION DESIGN TARGETS BY HABITAT TYPE**

<b>Habitat Type</b>	<b>Vegetative Cover (%)</b>	<b>Density of Native Woody Plants (stems/acre)</b>	<b>Native Species Richness (count)</b>
Chaparral	60	400	12
Grazing grasslands	70	NA	6
Upper riparian forest	60	175	16
Lower riparian forest	80	250	16
Freshwater emergent wetland	60	NA	3

Notes: NA = not applicable

Source: Appendix F, Table 4

**TABLE 2**  
**SUMMARY OF INTERIM AND FINAL PERFORMANCE GOALS**

<b>Goal Metric</b>	<b>Interim Goal</b>	<b>Final Goal (Year 5)</b>
Vegetative cover	30% of design target cover by Year 2 50% of design target cover by Year 3 70% of design target cover by Year 4	90% of design target cover by Year 5
Density of native woody plants	60% of design target density by habitat type	80% design target density by habitat type
Vigor of native woody plants	60% of living with vigor rating of 3 by habitat type	80% of living with vigor rating of 3 by habitat type
Native species richness	NA	75% of design target number of native species across all habitat types
Threshold cover for target invasive plants	<30% cover by Year 2 <20% cover by Year 3 <10% cover by Year 4	<5% by Year 5

Notes: NA = not applicable

Source: Appendix F, Table 5

If irrigation is used, revegetation must be self-sustaining without irrigation for 2 years before the release of financial assurance.

#### **5.5.4 Monitoring and Maintenance**

Appendix F, Section 5.2, "Performance Monitoring Methods," provides a description of monitoring and maintenance actions. Monitoring types and timing are summarized in the following list:

##### **Project Performance Goals**

- Monitor twice annually for 5 years following installation.
- Provide an annual report summarizing findings from spring and fall monitoring events to the County by December 15th each year.

##### **Early Weed Advisory**

- Monitor in early spring (February/March) for invasive plants.
- Information will be provided to restoration contractor early in spring.

Routine maintenance inspections may occur more frequently and at any time of the year.

Section 5.3, “Analysis and Reporting,” describes how data will be collected and reported. Data will be collected and analyzed as required, to assess whether the performance standards have been met. Annual monitoring reports of performance monitoring will document the performance standard parameters from all habitat types and whether the performance standards are being met. A final monitoring report will be produced upon successful achievement of all performance standards. If performance standards are not met, discussions will be held with relevant permitting agencies and remedial actions will be taken as necessary (see Section 6 of Appendix F); however, maintenance and/or interim remedial actions may be implemented as soon as determined necessary. An additional 1 or 2 years of monitoring may also be conducted in accordance with the methods described in Appendix F.

## 5.6 Environmental Protections

The following subsections provide a description of environmental protections related to sensitive plant and wildlife habitat and hydrology and water quality. In addition to these requirements, SMARA Section 2772.1(a)(7)(B) requires that official copy of the reclamation plan amendment include an index showing any permit conditions of approval or binding mitigation measures adopted or certified pursuant to the California Environmental Quality Act that are necessary to comply with SMARA and the County’s Surface Mining Ordinance. Those conditions of approval and mitigation measures are included in an Appendix I, “Reclamation-Related Conditions of Approval and Mitigation Measures,” and are considered part of the reclamation compliance requirements and subject to the annual inspection requirements.

### 5.6.1 Sensitive Species and Habitat

Stillwater Sciences conducted a habitat assessment of the site and area in December 2018 and contributed the information that follows within this subsection. See Appendix J, “Habitat Assessment,” for additional details.

#### Vegetation and Wildlife

The 181-acre site is dominated by ruderal herbaceous vegetation, with areas of ornamental plantings, oak woodland, oak riparian forest, chaparral, and coyote brush. Niles Quarry Creek, which flows north-northeast to south-southwest across the site, connects several small ponds and human-made basins and their associated freshwater emergent wetland and riparian scrub vegetation before entering Alameda Creek south of the site. Vegetation/habitat types are listed in Table 3, “Summary of Vegetation and Habitat Types.” See Appendix J, Figure 8, for the locations of these areas.

**TABLE 3**  
**SUMMARY OF VEGETATION AND HABITAT TYPES**

<b>Vegetation/Habitat Type</b>	<b>Acres</b>
Chaparral	4.5
Coyote Brush	3.9
Developed	2.2
Emergent Wetland	0.4
Oak Woodland	26.9
Oak/Riparian Forest	23.6
Open Water	1.0

<b>Vegetation/Habitat Type</b>	<b>Acres</b>
Ornamental plantings	7.0
Riparian Scrub	0.5
Ruderal Herbaceous	111.0
<b>TOTAL</b>	<b>181.0</b>

Descriptions of the vegetation types are provided in Appendix J, along with photographs of representative areas.

### **Sensitive Species**

Nine species were evaluated as having moderate or high likelihood to occur in the assessment area:

- valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*),
- California red-legged frog (*Rana draytonii*),
- western pond turtle (*Actinemys marmorata*),
- Alameda whipsnake (*Coluber lateralis euryxanthus*),
- white-tailed kite (*Elanus leucurus*),
- San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*),
- Townsend’s western big-eared bat (*Corynorhinus townsendii*),
- pallid bat (*Antrozous pallidus*), and
- American badger (*Taxidea taxus*).

Details on these species (i.e., listing status, habitat associations, and notable life history requirements) are provided in Appendix J. Figure 9 of Appendix J shows an approximation of suitable core habitat areas (areas in which individuals will likely spend most of their time finding shelter, breeding, hibernating, and foraging) for the federally or state-listed wildlife species with moderate or high potential to occur in the assessment area (i.e., California red-legged frog and Alameda whipsnake). The full assessment area may be used for California red-legged frog and Alameda whipsnake movement and dispersal.

### **Species and Habitat Protection Measures**

As described in Appendix J, the special-status wildlife species that reclamation activities may most likely affect include California red-legged frog, western pond turtle, Alameda whipsnake, San Francisco dusky-footed woodrat, and nesting migratory birds and raptors. There may be reclamation-related effects on nesting birds and raptors—including migratory birds and white-tailed kite—if disturbance occurs near active nest sites during the breeding season. A preconstruction nest survey will be completed for work conducted between February 1 and August 15 to avoid impacts on nesting birds.

To protect all aquatic species, standard best management practices are implemented to reduce potential impairment of all on-site waterbodies from sediment or inadvertent release of hazardous materials (see Appendix E).

In addition, as described in Sheet 1 of Appendix E, the contractor will be given copies of all required permits, become familiar with permit requirements, and be responsible for adherence to and conformance with requirements as provided by the following permits and agencies:

- U.S. Army Corps of Engineers Section 404 permit,
- California Department of Fish and Wildlife Section 1601/1603 streambed alteration agreement,
- San Francisco Bay Regional Water Quality Control Board (San Francisco Bay RWQCB) water quality certification,
- U.S. Fish and Wildlife Service (USFWS) consultation and implementation recommendations, and
- National Marine Fisheries Service (NMFS) consultation and implementation recommendations.

Stream diversions, if any, shall be constructed in accordance with Federal Clean Water Act and the Rivers and Harbors Act of 1899.

### **5.6.2 Hydrology and Water Quality**

Surface water runoff flows generally south toward SR 84. Surfaces also slope toward the center of the site, directing water into Niles Quarry Creek, which also flows generally south toward SR 84. Eight human-made basins of various sizes exist along the creek (Appendix J, Figure 2), seven of which hold water at least seasonally. Water collects in Basin 7 and exits to Basin 8 via a ditch during high flows only. Culverts from Basins 7 and 8 also direct water off-site during high water levels, to a series of culverts that direct water to Alameda Creek. Alameda Creek flows west along the southern side of SR 84.

#### **Stream and Wetland Protection**

Appendix E provides details on the plan for restoring the seasonal creek channel to provide habitat connectivity, slope stability, and erosion control. General notes, terms, and conditions are provided on Appendix E, Sheet 1. Channel stability is a concern throughout the project area, especially in the Culvert 2 restoration area (see Sheet 2 of Appendix E). Structures in these key locations are designed to protect the channel and banks from erosion by placing rock ramps and plunge pools at approximately 30-foot increments. The typical structure configuration is depicted in the design plans.

In addition, as described previously, the creek restoration activities will be implemented consistent with a Section 404 permit, Section 1601/1603 streambed alteration agreement, San Francisco Bay RWQCB water quality certification, the Federal Clean Water Act, the Rivers and Harbors Act of 1899, and USFWS and NMFS recommendations.

#### **Surface Water Protection**

BMPs will include good housekeeping, preventative maintenance, spill prevention and response, stormwater management practices, employee training, inspections, and monitoring. A storm water pollution prevention plan (SWPPP) under the General Permit for Storm Water Discharges Associated with Construction Activity (a construction SWPPP) will be prepared before reclamation activities begin. Preliminary erosion control and stormwater management measures are provided in Appendix D and E. If fertilizers are determined necessary for revegetation purposes, the manufacturers' directions for their use, storage, and disposal will be followed to ensure their safe use.

The site design and actions to control drainage, siltation, and erosion will be effective in protecting downstream beneficial uses of surface water in accordance with the Porter-Cologne Water Quality Control Act, Water Code § 13000, et seq., and the federal Clean Water Act, 33 U.S. Code § 1251, et seq.



## Groundwater Protection

Groundwater at the site is located below the floor of the existing operation and the final floor of the planned final topography. Local water levels are known to be approximately 100–150 feet below the ground surface.

If fertilizers are determined necessary for revegetation purposes, the manufacturers' directions for their use, storage, and disposal will be followed to ensure their safe use in relation to groundwater. In addition, BMPs will be included in the construction SWPPP that would help to protect surface water from exposure to contaminants and thus reduce the potential for contaminants in groundwater related to reclamation activities.

## 5.7 Future Mining Potential and Impact of Reclamation on Surrounding Land Uses

Reclamation activities will not physically or economically preclude future access to mineral resources, should additional recovery be pursued in the future.

## 5.8 Reclamation Schedule/Phasing

It is anticipated that reclamation will be complete approximately 4 years after receipt of the needed approvals and permits. Table 4, "Reclamation Permitting and Implementation Schedule," provides a tentative schedule for implementation of this reclamation plan following lead agency approval.

**TABLE 4**  
**RECLAMATION PERMITTING AND IMPLEMENTATION SCHEDULE<sup>1</sup>**

Tasks	Weeks
<b>PERMITTING</b>	
USACE 404 Individual Permit	56
RWQCB 401 Water Quality Certification	56
CDFW 1600 Permit	56
CDFW Incidental Take Permit	56
RWQCB Stormwater Pollution Prevention Plan	12
County Grading Permit	12
<b>RECLAMATION IMPLEMENTATION</b>	
Fill importation and engineered placement <sup>2</sup>	156
Stream restoration	52
Revegetation <sup>3</sup>	—
Monitoring <sup>4</sup>	260
<b>TOTAL</b>	<b>524</b>

<sup>1</sup> Local, state, and federal permitting will be conducted concurrently as appropriate

<sup>2</sup> Fill importation may be brought to site and stored at any time provided consistent with local, state and federal requirements.

<sup>3</sup> Concurrent with fill placement and stream restoration as appropriate

<sup>4</sup> Assumes performance standards achieved at year 5

## 5.9 Structure and Equipment Storage and Removal

The approved plan states that large water tanks would remain on site. However, they were removed from the site. Therefore, this reclamation plan reflects existing conditions and eliminates this

commitment and substitutes fire protection that was to be provided from these tanks to the appropriately sized tank described in this reclamation plan. The approximate limits of work during reclamation activities are shown on the drawings in Appendix E. Exact limits of work, points of ingress-egress, creek channel access, mobilization, staging, and work areas will be flagged in the field by the engineer. Equipment maintenance and fueling must occur outside of the channel area as described in the environmental permits for the activities.

After final mine closure, any remaining mobile equipment will be removed. Only the caretaker's house, the maintenance building, water supply tanks that will be used for fire protection, fencing, and the entrance gates will remain, which are located on the lower pad. See Section 5.1.2, "Surfaces to Remain," for a description of road surfaces to remain on-site.

## **5.10 Waste Removal**

Mine waste disposal is required to be consistent with Title 27, Chapter 7, Article 1 of the California Code of Regulations (CCR) (formerly codified as CCR Title 23, Chapter 15, Article 7). No waste from mining remains on-site. The SWPPP will ensure all other waste is disposed of in accordance with state and local health and safety ordinances.

## **5.11 Closure of Openings**

This operation currently has no open drill holes to close or monitoring wells to be abandoned. If any drill holes are developed, they will be closed in accordance with prevailing state requirements.

## **5.12 Public Safety Considerations**

### **5.12.1 Land Status**

The quarry is private property. The second land use of open space within the riparian corridor and agricultural use of the upper and lower pads will not increase the level of public exposure to the site. Final slopes are consistent with SMARA and therefore will pose no safety hazard. The caretaker's house, fencing, and gates will remain to provide for property security and patrol.

### **5.12.2 Access**

The entrance to the Niles Canyon Quarry is off Niles Canyon Road and will remain at this location. The Niles Canyon Quarry sign will be removed along with other on-site truck signage. The caretaker's house, fencing, and gates will remain to provide for property security and patrol.

## **6. FINANCIAL ASSURANCE**

This section addresses the primary reclamation tasks associated with the reclamation plan. These tasks are the basis of financial assurance calculations for the site. Financial assurance cost estimates are required to be revised annually (CCR Section 3804[c]) and will therefore change over the course of operations.

Financial assurance cost estimates for the initiation of the operation are based on:

- an analysis of the physical activities necessary to implement the approved reclamation plan,
- the lead agency's (or third party contract) unit costs for each of these activities,
- the number of units of each of these activities, and

- an amount to cover contingency costs (not to exceed 10 percent of the above calculated reclamation cost) and actual lead agency administrative costs.

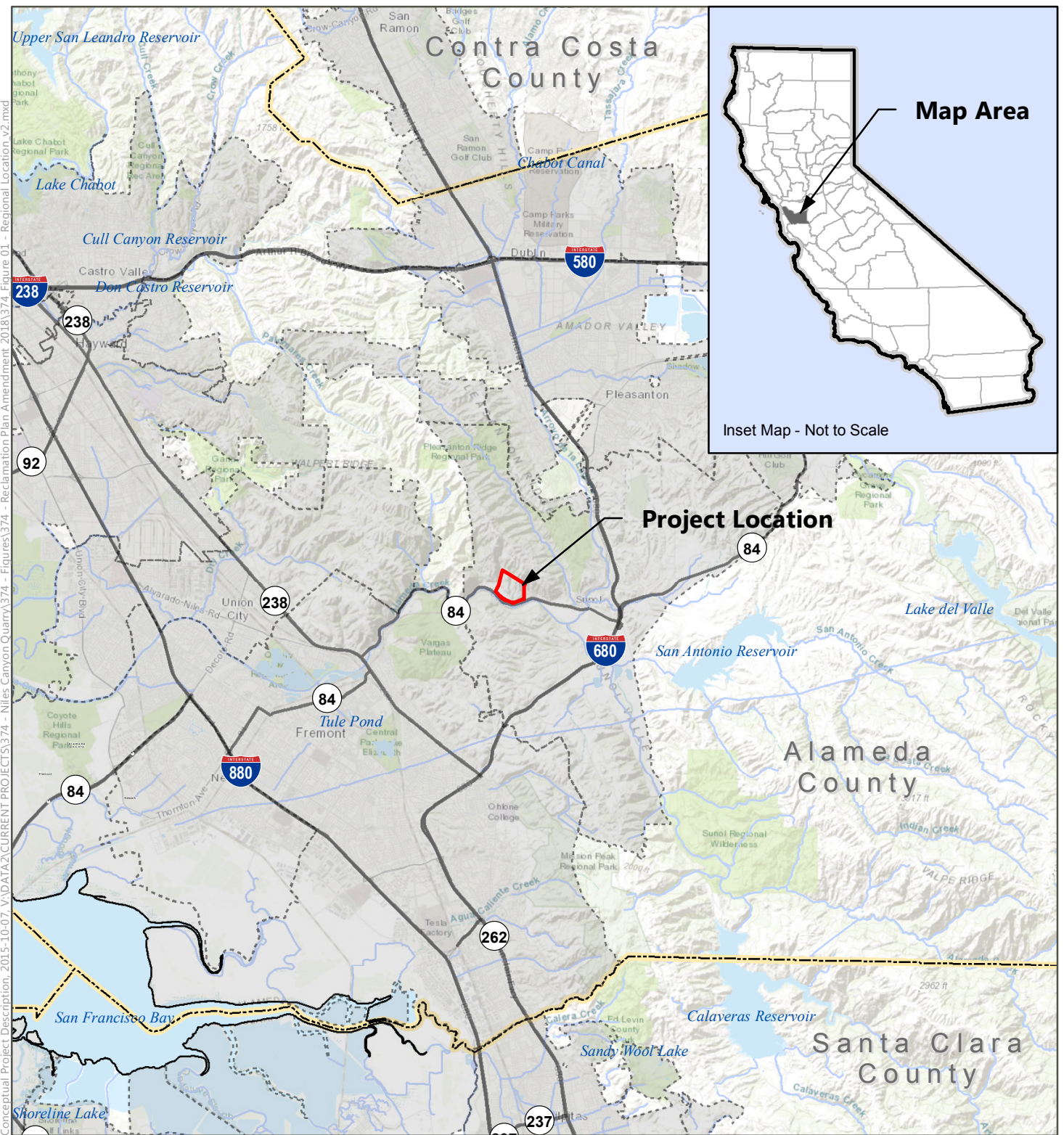
The following tasks will need to be completed to implement this reclamation plan:

- **Equipment Removal**
  - Remove mobile equipment.
- **Grading and Fill**
  - Import and manage fill material against erosion.
  - Contour slopes as necessary to provide slope stability and establish drainage.
  - Place and compact fill to stabilize slopes.
- **Stream Enhancement**
  - Import rock material (e.g., riprap).
  - Grade and fill stream to design specifications.
  - Place in-stream structures (e.g., rock ramps, plunge pools).
- **Revegetation**
  - Import and manage topsoil stockpiles against erosion.
  - Distribute topsoil.
  - Seed and plant to design specifications.
- **Monitoring/Maintenance**
  - Inspect planting and seeding success.
  - Inspect slopes for erosion.
  - Monitor for noxious weeds.
  - Maintain and weed the revegetation.
  - Collect data and report on reclamation progress.
  - Prepare contingency for replanting.

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FIGURES







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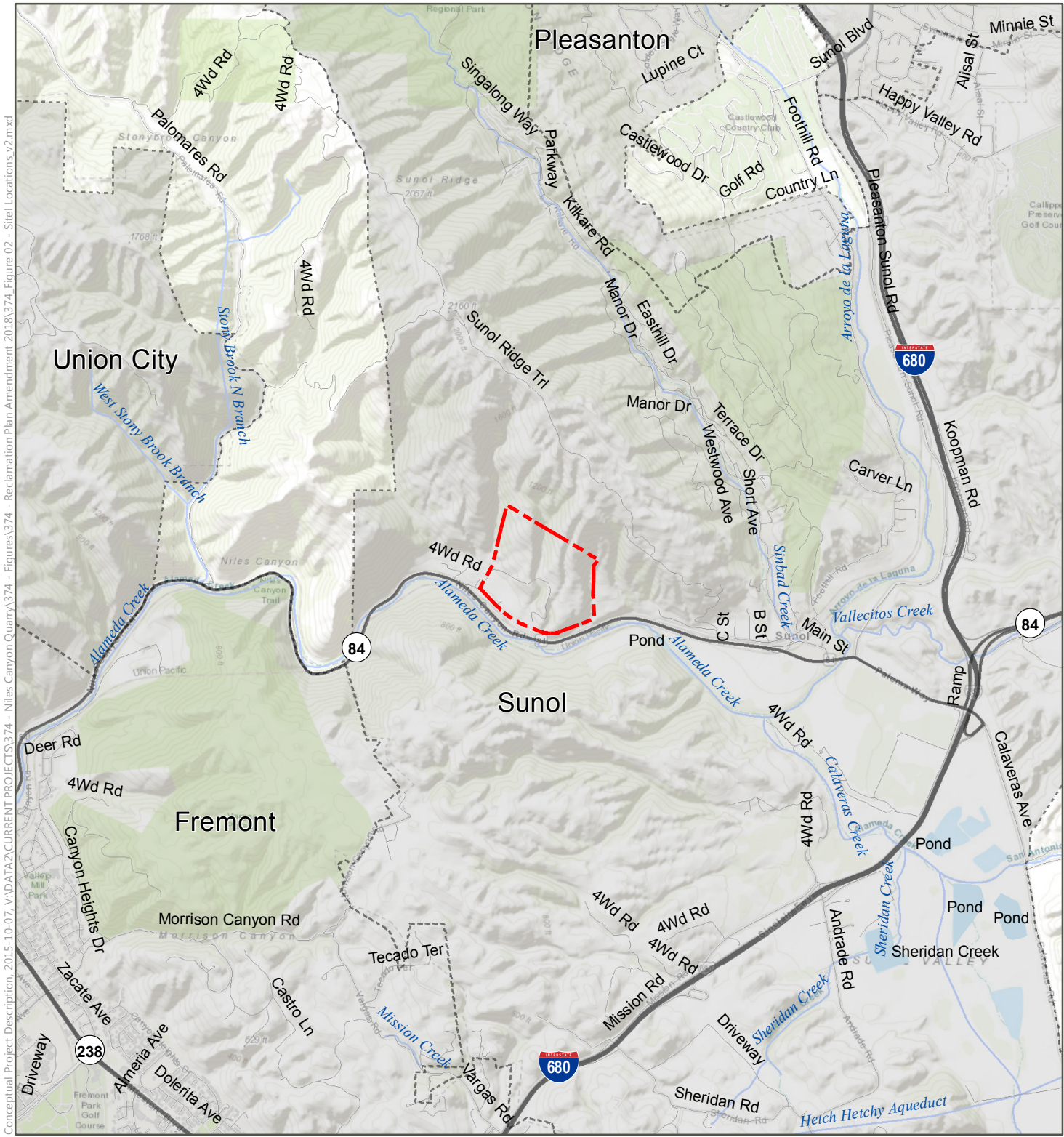


Conceptual Project Description, 2015-10-07, V:\DATA\CURRENT PROJECTS\374 - Niles Canyon Quarry\374 - Figures\374 - Reclamation Plan Amendment, 2018\374 Figure 01 - Regional Location.v2.mxd

SOURCES: ESRI World Shaded Relief accessed April 2018, ESRI World Topographic Map accessed July 2018; ESRI World Streetmap, 2009; Adapted by Benchmark Resources in 2018

NOTES: This figure was prepared for land use planning and informational purposes only. The info shown and its accuracy are relative of the date the data was accessed or produced.

- |   |                           |   |            |
|---|---------------------------|---|------------|
|  | Reclamation Plan Boundary |  | Major Road |
|  | City Boundary             |  | River      |
|  | County Boundary           |  | Water Body |



SOURCES: ESRI World Shaded Relief accessed April 2018, ESRI World Topographic Map accessed July 2018; ESRI World Streetmap, 2009; Adapted by Benchmark Resources in 2019

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- Reclamation Plan Boundary
- City Boundary
- Water Body
- Major Road
- Street
- River

Conceptual Project Description, 2015-10-07, V:\DATA\CURRENT PROJECTS\374 - Niles Canyon Quarry\374 - Figures\374 - Reclamation Plan Amendment, 2018\374 Figure 02 - Site Locations v2.mxd



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SOURCE: (Aerial) DigitalGlobe flown on 8-19-2017;  
 Compiled by Benchmark Resources in 2018

- - - - - Reclamation Plan Boundary



INDEX CHECKLIST

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**NILES CANYON QUARRY (SMP-34) RECLAMATION PLAN**  
**INDEX TO REQUIRED CONTENT**

**Applicable Amendments:** None      **End Use:** Agricultural and open space within the riparian corridor  
**Date:** May 2019

Authority	Requirements/Practices/Standards	Applicable	Source/Page or Explanation
<b>GENERAL CONSIDERATIONS</b>			
PRC 2772(b)	Required contents chart: A chart identifying the location (e.g. page number, chapter, appendix, or other location in the reclamation plan) of content that meets the requirements of PRC Sections 2772, 2773, 2773.3 and CCR Articles 1 and 9 (as delineated in this checklist).	Yes	Index
PRC 2772(c)(1)	Contact information: Name and address of the surface mining operator and any person designated by the operator as an agent for service of process (must reside in CA).	Yes	Section 3.1
PRC 2772(c)(2)	Material quantity and type: The anticipated total quantity and type of minerals to be mined (see Annual Report Instructions, Exhibit B, for mineral types and units of measure).	No	Site closed with no intent to resume mining
PRC 2772(c)(3)	Dates: The initiation and termination dates of mining (be as specific as possible, e.g. December 31, 2030).	No	Site closed with no intent to resume mining
PRC 2772(c)(4)	Depth of mining: The maximum anticipated depth of surface mining in relation to a verifiable benchmark such as Mean Sea Level.	No	Site closed with no intent to resume mining
PRC 2772(c)(5) (A-F)	Reclamation plan maps shall include: Size and legal description of lands affected by surface mining operations;	Yes	Appendices B, C, and D
	Names and addresses of owners of all surface interests and mineral interests;	Yes	Appendices C and D
	Property lines, setbacks, and the reclamation plan boundary;	Yes	Appendices C and D
	Existing and final topography with contour lines at appropriate intervals;	Yes	Appendix D
	Detailed geologic description of the area of the surface mining operation;	Yes	Section 5.2, Appendix G
	Locations of railroads, utility features, and roads (access roads, temporary roads to be reclaimed, and any roads remaining for the end use).	Yes	Figure 3, Appendices C and D
	All maps, diagrams, or calculations that are required to be prepared by a California-licensed professional shall include the preparer's name, license number, signature & seal.	Yes	Appendices C and D

Authority	Requirements/Practices/Standards	Applicable	Source/Page or Explanation
PRC 2772(c)(6)	Mining method and schedule: A description of the mining methods and a time schedule that provides for completion of mining on each segment so that reclamation can be concurrent or phased.	No	Site closed with no intent to resume mining
PRC 2772(c)(7)	Subsequent use(s): A description of the proposed subsequent use(s) after reclamation	Yes	Section 1.3
	Evidence that all landowners have been notified of the proposed use.	Yes	Appendix A
PRC 2772(c)(9)	Impact on future mining: A statement regarding the impact of reclamation on future mining on the site.	Yes	Section 5.7
PRC 2772(c)(10)	Signed statement: Statement signed by the operator accepting responsibility for reclamation of the mined lands per the reclamation plan.	Yes	Appendix A
PRC 2776(b-c)	Pre-SMARA areas: Reclamation plans shall apply to operations conducted after January 1, 1976 or to be conducted in the future. Mined lands disturbed prior to January 1, 1976 <i>and not disturbed after that date</i> may be excluded from the reclamation plan.	No	No pre-SMARA areas are on-site
CCR 3502(b)(2)	Public health and safety: A description of how any potential public health and safety concerns that may arise due to exposure of the public to the site will be addressed.	Yes	Section 5.12
CCR 3709(a)	Equipment storage and waste disposal: Designate areas for equipment storage and show on maps.	Yes	Sections 5.9 and 5.10
	All waste shall be disposed of in accordance with state and local health and safety ordinances.	Yes	Sections 5.9 and 5.10
CCR 3709(b)	Structures and equipment removed: Structures and equipment should be dismantled and removed at closure, except as demonstrated to be necessary for the proposed end use.	Yes	Section 5.9
CCR 3713(a)	Well closures: Drill holes, water wells, monitoring wells will be completed or abandoned in accordance with laws, unless demonstrated necessary for the proposed end use.	Yes	Section 5.11
CCR 3713(b)	Underground openings: Any portals, shafts, tunnels, or openings will be gated or protected from public entry, and to preserve access for wildlife (e.g. bats).	Yes	Section 5.11
<b>GEOLOGY AND GEOTECHNICAL</b>			
PRC 2772(c)(5)	A description of the general geology of the area	Yes	Section 5.2.1
	A detailed description of the geology of the mine site.	Yes	Section 5.2.1

Authority	Requirements/Practices/Standards	Applicable	Source/Page or Explanation
PRC 2773.3	If a metallic mine is located on, or within one mile of, any "Native American sacred site" and is located in an "area of special concern," the reclamation plan shall require that all excavations and/or excess materials be backfilled and graded to achieve the approximate original contours of the mined lands prior to mining.	No	Not a metals mine
CCR 3502(b)(4)	The source and disposition of fill materials used for backfilling or grading shall be considered in the reclamation plan.	Yes	Section 5.2.2
CCR 3502(b)(3)	The designed steepness and treatment of final slopes must consider the physical properties of slope materials, maximum water content, and landscaping.	Yes	Sections 5.1.1 and 5.2.4; Appendices D, E, and F
	The reclamation plan shall specify slope angles flatter than the critical gradient for the type of slope materials.	Yes	Sections 5.1.1 and 5.2.4, Appendix G
	When final slopes approach the critical gradient, a Slope Stability Analysis will be required.	Yes	Appendix G
CCR 3704.1	Backfilling required for surface mining operations for metallic minerals.	No	Not a metals mine
CCR 3704(a)	For urban use, fill shall be compacted in accordance with Uniform Building Code, local grading ordinance, or other methods approved by the lead agency.	No	Not urban use
CCR 3704(b)	For resource conservation, compact to the standards required for that end use.	Yes	Section 5.2.4
CCR 3704(d)	Final reclamation fill slopes shall not exceed 2:1 (H:V), except when allowed by site-specific engineering analysis, and the proposed final slope can be successfully revegetated. See also Section 3502(b)(3).	Yes	Section 5.1.1
CCR 3704(e)	At closure, all fill slopes shall conform with the surrounding topography or approved end use.	Yes	Section 5.1.1
CCR 3704(f)	Final cut slopes must have a minimum slope stability factor of safety that is suitable for the end use and conforms with the surrounding topography or end use.	Yes	Section 5.2.4
<b>HYDROLOGY AND WATER QUALITY</b>			
PRC 2770.5	For operations within the 100-year flood plain (defined by FEMA) and within one mile up- or downstream of a state highway bridge, Caltrans must be notified and provided a 45-day review period by the lead agency.	No	Not in 100-year floodplain
PRC 2772(c)(8)(A)	Description of the manner in which contaminants will be controlled and mine waste will be disposed.	Yes	Sections 5.6.2 and 5.10
PRC 2772(c)(8)(B)	The reclamation plan shall include a description of the manner in which stream banks/beds will be rehabilitated to minimize erosion and sedimentation.	Yes	Sections 1.3 and 5.1.1, Appendices D, E, and F
PRC 2773(a)	The reclamation plan shall establish site-specific sediment and erosion control criteria for monitoring compliance with the reclamation plan.	Yes	Section 5.2.3

Authority	Requirements/Practices/Standards	Applicable	Source/Page or Explanation
CCR 3502(b)(6)	Temporary stream and watershed diversions shall be detailed in the reclamation plan.	Yes	Section 5.6.1, under "Species and Habitat Protection Measures," and Appendix E
CCR 3503(a)(2)	Stockpiles of overburden and minerals shall be managed to minimize water and wind erosion.	Yes	Section 5.3.1, Appendices E and F
CCR 3503(b)(2)	Operations shall be conducted to substantially prevent siltation of groundwater recharge areas.	No	Site closed with no intent to resume mining
CCR 3503(a)(3)	Erosion control facilities shall be constructed and maintained where necessary to control erosion.	Yes	Section 5.2.3
CCR 3503(b)(1)	Settling ponds shall be constructed where they will provide a significant benefit to water quality.	Yes	Section 5.6.2, Appendix E
CCR 3503(d)	Disposal of mine waste and overburden shall be stable and shall not restrict natural drainage without suitable provisions for diversion.	Yes	Sections 5.6.2 and 5.10
CCR 3503(e)	Grading and revegetation shall be designed to minimize erosion and convey surface runoff to natural drainage courses or interior basins.	Yes	Sections 5.2.3, 5.2.4, and 5.5; Appendices D, E, and F
	Spillway protection shall be designed to prevent erosion.	No	Appendices D, E, and F
CCR 3706(a)	Surface mining and reclamation activities shall be conducted to protect on-site and downstream beneficial uses of water.	Yes	Sections 5.2.3, 5.3.1, and 5.6.2
CCR 3706(b)	Water quality, recharge potential, and groundwater storage that is accessed by others shall not be diminished.	Yes	Section 5.6.2
CCR 3706(c)	Erosion and sedimentation shall be controlled during all phases of construction, operation, reclamation, and closure of surface mining operations to minimize siltation of lakes and water courses as per RWQCB/SWRCB.	Yes	Sections 5.2.3, 5.3.1, and 5.6.2
CCR 3706(d)	Surface runoff and drainage shall be controlled to protect surrounding land and water resources.	Yes	Sections 5.2.3, 5.3.1, and 5.6.2
	Erosion control methods shall be designed for not less than 20 year/1 hour intensity storm event.	Yes	Section 5.2.3, Appendices D and E
CCR 3706(e)	Impacted drainages shall not cause increased erosion or sedimentation. Mitigation alternatives shall be proposed in the reclamation plan.	Yes	Section 5.2.3, Appendices D and E

Authority	Requirements/Practices/Standards	Applicable	Source/Page or Explanation
CCR 3706(f)(1)	Stream diversions shall be constructed in accordance with the Lake and Streambed Alteration Agreement (LSAA) between the operator and the Department of Fish and Wildlife.	Yes	Section 5.6.1, Appendices E and J
CCR 3706(f)(2)	Stream diversions shall also be constructed in accordance with Federal Clean Water Act and the Rivers and Harbors Act of 1899.	Yes	Section 5.6.1, Appendices D, E, and J
CCR 3706(g)	All temporary stream diversions shall eventually be removed and the affected land reclaimed.	Yes	Section 5.2.3, Appendices D and E
CCR 3710(a)	Surface and groundwater shall be protected from siltation and pollutants in accordance with the Porter-Cologne Act, the Federal Clean Water Act, and RWQCB/SWRCB requirements.	Yes	Section 5.2.3, Appendices D and E
CCR 3710(b)	In-stream mining shall be conducted in accordance with Section 1600 et seq. of the California Fish and Game Code, Section 404 of the Clean Water Act, and Section 10 of the Rivers and Harbors Act of 1899.	No	Not an instream operation
CCR 3710(c)	In-stream mining shall be regulated to prevent impacts to structures, habitats, riparian vegetation, groundwater levels, and banks.	No	Not an instream operation
	In-stream channel elevations and bank erosion shall be evaluated annually using extraction quantities, cross-sections, and aerial photos.	No	Not an instream operation
CCR 3712	Mine waste and tailings and mine waste disposal units are governed by SWRCB waste disposal regulations and shall be reclaimed in accordance with this article: CCR Article 1. Surface Mining and Reclamation Practice. Section 3500 et seq.	Yes	Section 5.10
<b>SENSITIVE SPECIES AND HABITAT</b>			
CCR 3502(b)(1)	A description of the environmental setting (identify sensitive species, wildlife habitat, sensitive natural communities, e.g. wetlands).	Yes	Section 5.6, Appendix J
	Impacts of reclamation on surrounding land uses.	No	No off-site impacts
CCR 3503(c)	Fish and wildlife habitat shall be protected by all reasonable measures.	Yes	Section 5.6, Appendices I and J
CCR 3703(a)	Sensitive species shall be conserved or mitigated as prescribed by the federal and California Endangered Species Acts.	Yes	Section 5.6, Appendices I and J
CCR 3703(b)	Wildlife habitat shall be established on disturbed land at least as good as pre-project, unless end use precludes its use as wildlife habitat.	No	Habitat not a reclamation goal

Authority	Requirements/Practices/Standards	Applicable	Source/Page or Explanation
CCR 3703(c)	Wetlands shall be avoided or mitigated at 1:1 minimum for both acreage and habitat value.	Yes	Section 5.6, Appendices I and J
CCR 3704(g)	Piles or dumps shall not be placed in wetlands without mitigation.	Yes	Section 5.3.1, Appendices E and F
CCR 3710(d)	In-stream mining shall not cause fish to be trapped in pools or off-channel pits, or restrict migratory or spawning activities.	No	Not an instream operation
<b>TOPSOIL</b>			
CCR 3503(a)(1)	Removal of vegetation and overburden preceding mining shall be kept to a minimum.	No	Site closed with no intent to resume mining
CCR 3503(f)	When the reclamation plan calls for resoiling, mine waste shall be leveled and covered with a layer of finer material. A soil layer shall then be placed on this prepared surface.	Yes	Section 5.3, Appendix F
	The use of soil conditioners, mulches, or imported topsoil shall be considered where such measures appear necessary.	Yes	Sections 5.4 and 5.2.2, Appendix F
CCR 3704(c)	Mine waste shall be stockpiled to facilitate phased reclamation and kept separate from topsoil or other growth media.	Yes	Section 5.3.1
CCR 3705(e)	If soil is altered or other than native topsoil, soil analysis is required. Add fertilizers or soil amendments if necessary.	Yes	Section 5.3.2, Appendix F
CCR 3711(a)	All salvageable topsoil shall be removed as a separate layer.	Yes	Section 5.2.2
	Topsoil and vegetation removal should not precede mining by more than one year.	No	Site closed with no intent to resume mining
CCR 3711(b)	Topsoil resources shall be mapped prior to stripping and location of topsoil stockpiles shown on map included in the reclamation plan.	Yes	Figure 3 and Section 5.2.2
	Topsoil and other growth media shall be maintained in separate stockpiles.	Yes	Section 5.3.1
	Test plots may be required to determine the suitability of growth media for revegetation purposes.	No	Section 5.4
CCR 3711(c)	Soil salvage operations and phases of reclamation shall be set forth in the reclamation plan to minimize the area disturbed and to achieve maximum revegetation success.	Yes	Sections 5.2.2 and 5.8
CCR 3711(d)	Topsoil and growth media shall be used to phase reclamation as soon as can be accommodated following the mining of an area.	No	Site closed with no intent to resume mining; Section 5.8
	Topsoil stockpiles shall not be disturbed until needed for reclamation.	Yes	Section 5.2.2

Authority	Requirements/Practices/Standards	Applicable	Source/Page or Explanation
	Topsoil stockpiles shall be clearly identified with signs.	Yes	Sections 5.2.2 and 5.3.1
	Topsoil shall be planted with vegetation or otherwise protected to prevent erosion and discourage weeds.	Yes	Section 5.3.1, Appendices E and F
CCR 3711(e)	Topsoil shall be redistributed in a manner resulting in a stable, uniform thickness consistent with the end use.	Yes	Section 5.3, Appendix F
<b>REVEGETATION</b>			
PRC 2773(a)	The reclamation plan shall be specific to the property and shall establish site-specific criteria for evaluating compliance with the reclamation plan with respect to revegetation.	Yes	Section 5.5, Appendix F
CCR 3503(g)	Available research regarding revegetation methods and selection of species given the topography, resoiling characteristics, and climate of the mined areas shall be used.	Yes	Section 5.5, Appendix F
CCR 3705(a)	Baseline studies shall be conducted prior to mining activities to document vegetative cover, density, and species richness.	Yes	Section 5.5, Appendix F
	Vegetative cover shall be similar to surrounding habitats and self-sustaining.	Yes	Section 5.5, Appendix F
CCR 3705(b)	Test plots shall be conducted simultaneously with mining to ensure successful implementation of the proposed revegetation plan.	No	Section 5.4
CCR 3705(c)	Decompaction methods, such as ripping and disking, shall be used in areas to be revegetated to establish a suitable root zone for planting.	Yes	Section 5.2.4, Appendix E
CCR 3705(d)	Roads shall be stripped of roadbase materials, resoiled, and revegetated, unless exempted.	Yes	Figure 3, Sections 5.1.2, 5.2.4
CCR 3705(f)	Temporary access shall not disrupt the soil surface on arid lands except where necessary for safe access.	No	Not an arid lands site
CCR 3705(f)	Barriers shall be installed to keep unauthorized vehicles out.	Yes	Section 5.5.1, Appendices D and E
CCR 3705(g)	Use local native plant species (unless non-native species meet the end use).	Yes	Section 5.5, Appendix F
	Areas to be developed for industrial, commercial, or residential shall be revegetated for the interim period to control erosion.	No	End use is agriculture and open space
CCR 3705(h)	Planting shall be conducted during the most favorable period of the year for plant establishment.	Yes	Section 5.5, Appendix F
CCR 3705(i)	Use soil stabilizing practices and irrigation when necessary to establish vegetation.	Yes	Section 5.5, Appendix F
CCR 3705(j)	If irrigation is used, demonstrate that revegetation has been self-sustaining without irrigation for two years prior to the release of financial assurance.	Yes	Section 5.5.3, Appendix F



<b>Authority</b>	<b>Requirements/Practices/Standards</b>	<b>Applicable</b>	<b>Source/Page or Explanation</b>
CCR 3705(k)	Weeds shall be monitored and managed.	Yes	Sections 5.5.2, 5.5.4, Appendix F
CCR 3705(l)	Plant protection measures such as fencing and caging shall be used where needed for revegetation success. Protection measures shall be maintained until revegetation efforts are successfully completed and the lead agency authorizes removal.	Yes	Section 5.5.1
CCR3705(m)	Quantitative success standards for vegetative cover, density, and species richness shall be included in the reclamation plan.	Yes	Section 5.5, Appendix F
	Monitoring to occur until success standards have been achieved.	Yes	Section 5.5, Appendix F
	Sampling techniques for measuring success shall be specified. Sample size must be sufficient to provide at least an 80 percent statistical confidence level.	Yes	Section 5.5, Appendix F
<b>AGRICULTURE</b>			
CCR 3707(a)	Where the end use will be agriculture, prime agricultural land shall be returned to a fertility level specified in the reclamation plan.	No	Not prime agricultural land
CCR 3707(b)	Segregate and replace topsoil in proper sequence by horizon in prime agricultural soils.		
CCR 3707(c)	Post reclamation productivity rates for prime agricultural land must be equal to pre-project condition or to a similar site for two consecutive years.		
	Productivity rates shall be specified in the reclamation plan.		
CCR 3707(d)	If fertilizers and amendments are applied, they shall not cause contamination of surface or groundwater.	Yes	Section 5.6.2
CCR 3708	For sites where the end use is to be agricultural, non-prime agricultural land must be reclaimed to be capable of sustaining economically viable crops common to the area.	No	Not prime agricultural land

## REFERENCES AND RESOURCES

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- Alameda County. 2002. *East County Area Plan, a Portion of the Alameda County General Plan*. Adopted May 5, 1994; reflects board of supervisor amendments through May 2002. Hayward, CA.
- Dibblee, T.W., and Minch, J.A. 2005 (April). *Geologic map of the Niles quadrangle, Alameda County, California*. 1:24,000 scale, Dibblee Foundation Map DF-151. Santa Barbara, CA: Santa Barbara Museum of Natural History.
- Graymer, R.W., D.L. Jones, and E.E. Brabb. 1992. Preliminary geologic map emphasizing bedrock formations in Alameda County, California: A digital database. Scale 1:75,000. Available: [https://ngmdb.usgs.gov/Prodesc/proddesc\\_22969.htm](https://ngmdb.usgs.gov/Prodesc/proddesc_22969.htm). Accessed June, 2018.
- ParcelQuest. 2018. Results of electronic database search for records of Alameda County Assessor's Parcel Numbers. Available: [parcelquest.com](http://parcelquest.com). Accessed December 19, 2018.
- Terrasearch Inc. 1979 (March 30). *Geologic and Slope Stability Evaluation*. San Jose, CA. Prepared for Ki-Lite Quarry for California Environmental Technology, Richmond, CA.
- U.S. Fish and Wildlife Service. 2017. *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus)*. Sacramento, CA.
- USFWS. *See* U.S. Fish and Wildlife Service.

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