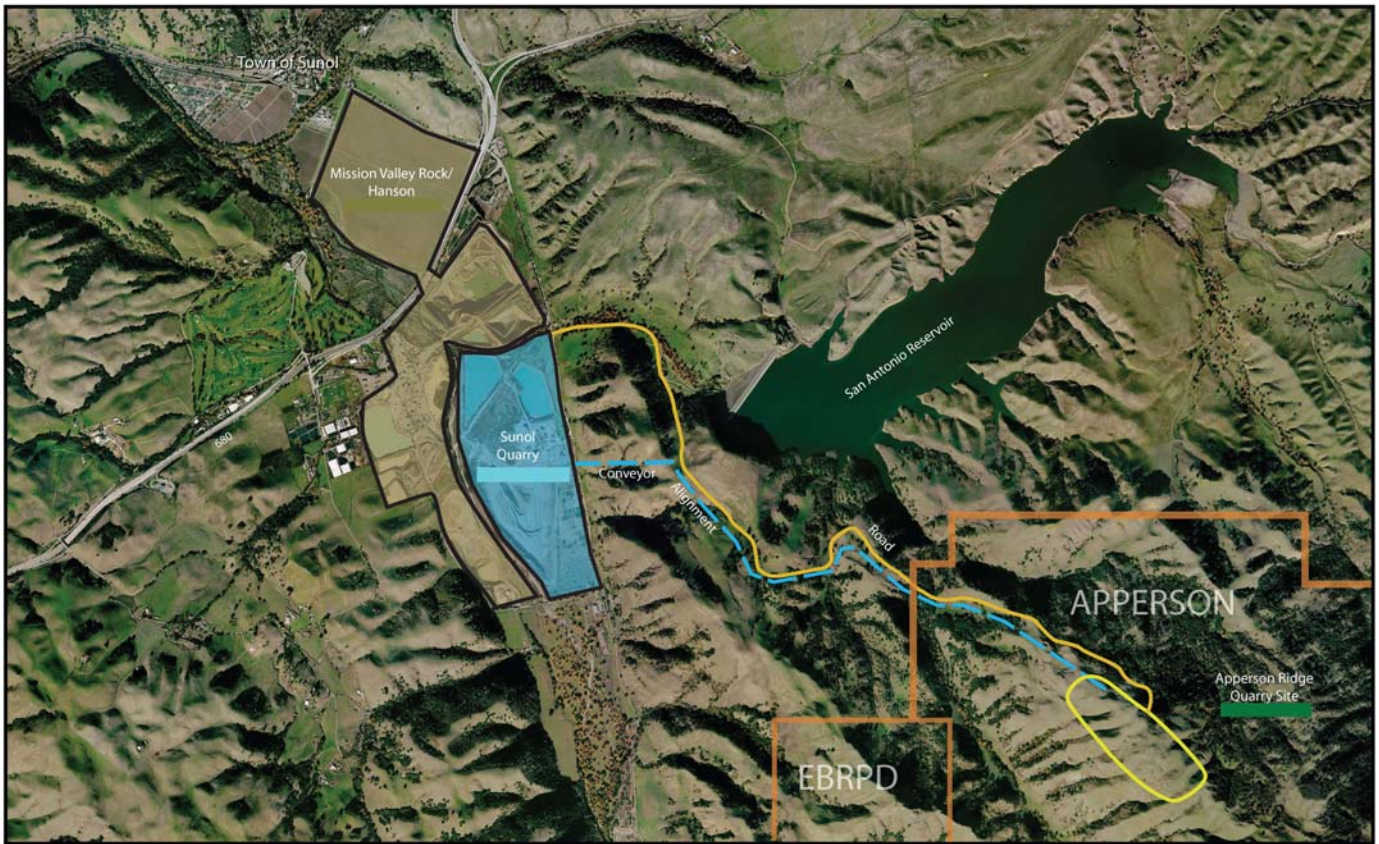


# Apperson Ridge Conservation Plan SMP-17 SITE



A Conservation Plan by Oliver de Silva, Inc. to Protect  
and Enhance the Biological Resources of Apperson  
Ridge in Alameda County, California

December 18, 2008

## **EXECUTIVE SUMMARY**

This Conservation Plan was prepared by Oliver de Silva, Inc. (“ODS”), the Alameda Creek Alliance (“ACA”), and the Center for Biological Diversity (“CBD”), to protect and enhance the biological resources in the vicinity of Apperson Ridge in Alameda County, California. The conservation measures in this plan will significantly reduce the potential impacts of the approved Apperson Quarry mining operation on native wildlife species and their habitats, will provide further mitigation for unavoidable biological impacts, and will enhance special-status species and their habitats in the vicinity of the project.

Once it receives all necessary governmental approvals for the revised quarry project, Oliver de Silva, Inc. (“ODS”) will fund, implement and monitor the avoidance, mitigation, and restoration measures detailed in this Conservation Plan to best protect and conserve special-status species and their habitats, prior to and during the development of hard rock quarry operations at the Apperson Ridge Quarry on private land, under Surface Mining Permit 17 (“SMP-17”).

The approved Apperson Ridge Quarry is located on the privately owned Apperson Ranch, atop Apperson Ridge in the Sunol area of unincorporated Alameda County. SMP-17 was approved in 1984 by Alameda County. A mining footprint of approximately 116 acres is located within a 680-acre leasehold on the 2,555 acre Apperson Ranch, approximately three miles southeast of I-680 and Vallecitos Road and one mile east of Calaveras Road. Public lands abut the Ranch on three sides, including San Antonio Reservoir and public watershed lands managed by the San Francisco Public Utilities Commission (“SFPUC”) and Sunol Regional Wilderness, managed by the East Bay Regional Park District (“EBRPD”).

The Apperson Quarry project as approved by Alameda County in 1984 includes a combination of pit, hilltop, and side-hill mining to remove 123 million tons (49.2 million cubic yards) of basalt from the top of Apperson Ridge, through 2064. Approved on site facilities include processing plants and facilities for production and retail sales of aggregate, asphalt, and concrete adjacent to the quarry; equipment storage yards, administrative offices, and scale houses adjacent to the quarry; storage piles and load out bunkers; and crushing equipment, stackers, screens, a mixer, a storage silo, a hopper and conveyors. Processing and secondary crushing of mined rock can be done on site 24 hours per day, seven days per week.

Pursuant to SMP-17, extracted rock will be transported by wheeled haul trucks to an on-site processing area for screening, crushing, storage, transfer to over-the-road trucks, and for the manufacture of asphalt concrete and cementitious concrete. Grading and fill for a new access road within a 50 foot right of way has been approved along a private access easement traversing approximately 2.8 miles of SFPUC watershed lands from Calaveras Road to the Apperson Ranch boundary and then across 1.9 miles of the Apperson Ranch to the quarry plant site. The average daily truck traffic during the construction season was estimated at 1,160 vehicle trips per day. Hauling of finished products off-site would occur Monday through Friday between the hours of 6:00 am and 6:00 pm with weekends allowed with advance notice to the County.

The principal method of extraction of material from Apperson Ridge is removing the rock from the ground with a bulldozer and by blasting. Blasting is expected to occur about three times per week when large rocks and hard deposits are encountered. Mining is expected to normally occur Monday through Friday between the hours of 6:00 am and 6:00 pm and during daylight hours, whichever is longer, although weekend operation is allowed with advance notice to the County.

Alameda County required 62 Conditions of Approval for the SMP-17 permit, many relating to potential impacts to biological resources. ODS also signed agreements in 1984 regarding the Apperson Quarry with the EBRPD and conservation groups. Those Agreements include measures that restrict the extent of quarrying on Apperson Ridge, configure quarrying activities to reduce visual and noise impacts on adjacent Regional Parks, add 320 acres of private lands to the EBRPD, give the EBRPD first right of refusal for purchasing non-quarry lands on the Apperson Ranch, maintain the agricultural zoning of the 680 acre Apperson lease parcel until 2064, provide royalties to the EBRPD to purchase and preserve additional lands as mitigation for biotic impacts, and provided mitigation payments for peregrine falcon reintroduction and surveys as compensation for impacts to raptors. Reference is made to those agreements for their terms, which generally are intended to further mitigate the potential impacts of SMP-17.

Special-status species that may occur within the vicinity of the Apperson Quarry that will benefit from the conservation measures in this plan include the California tiger salamander, California red-legged frog, Alameda whipsnake, nesting raptors, and tule elk. A number of additional native wildlife species and special-status plant species that have the potential to occur in the vicinity of the project are discussed in Appendix B. ODS has voluntarily agreed to the additional mitigation measures in this Conservation Plan to further avoid and reduce direct impacts to species, improve habitat protection, further mitigate for habitat loss, and enhance habitat for many special-status species.

In 2006, ODS submitted a mining proposal for a separate, but nearby, mining lease on SFPUC land in the Sunol Valley, Surface Mining Permit 30 (“SMP-30”). ODS contemplates additional, future mining operations at the SMP-30 site, subject to the approval by the SFPUC of a revised permit for the site (“Revised SMP-30”). Activities under SMP-30 and Revised SMP-30 are separate and distinct projects, with independent utility, from mining activities pursuant to SMP-17 and are not covered in this plan, which is focused on conservation measures related to mining activities under SMP-17. A separate Conservation Plan agreed to by ODS, CBD and ACA covers conservation and habitat enhancement measures associated with the SMP-30 and Revised SMP-30 projects.

This plan covers two distinct areas: **First**, this plan specifies agreed-upon conservation measures related to mining activities under SMP-17. These measures, which are set forth in detail in Section 2 below, include the following:

- Further mitigation of permanent habitat loss due to the footprint of mining and infrastructure through purchase and/or permanent protection of similar habitats on private land, at a preservation ratio of 3:1, and with a minimum parcel or parcels consisting of 600 acres protected;

- Robust mitigation for any loss of breeding habitat for several focal species (California red-legged frog, California tiger salamander, Alameda whipsnake, and nesting raptors) at a 4:1 preservation ratio;
- Mitigation of temporary habitat loss through purchase and permanent protection of similar habitats on private land, at a 1:1 preservation ratio; or with enhancement of similar habitats on protected public land, at a 2:1 preservation ratio;
- Adoption of a comprehensive tule elk mitigation and monitoring plan;
- Initiating an incidental take permit process, using a federal Habitat Conservation Plan with the U. S. Fish and Wildlife Service (and the National Marine Fisheries Service, if necessary) that will include mitigation measures for unavoidable potential impacts to special-status species;
- Unless presence is assumed, or surveys are not appropriate, focused species surveys to determine the presence of special-status species and the extent of their suitable habitat in the Project Area;
- Potential stockpiling of mined rock to allow for seasonal constraints on blasting operations, as feasible, to minimize potential noise disturbance to tule elk, nesting raptors, and other wildlife;
- Best management practices and take avoidance measures to exclude special status species from mining and equipment areas before construction, and in some cases, relocation of individual animals or plants before mining activities; and
- A commitment to reduce the greenhouse gas emissions of the Apperson Quarry project and purchase approved carbon offsets in accordance with GG-1 (Additional Conservation Measure).

**Secondly**, this plan provides that ODS, before undertaking mining activities at the Apperson Quarry site, will propose to Alameda County and the SFPUC a Revised SMP-17 project, which could result in significant changes to the operation of SMP-17 that will reduce impacts to biological resources. ODS will use all reasonable efforts to obtain the agencies' approval for these changes in a permit for the modifications proposed to the operations at the SMP-17 site ("Revised SMP-17"). The specific modifications that ODS agrees to seek through Revised SMP-17 are set forth in detail in section 2.3.1 below. These changes would include the following:

- Conditioned upon Approval of Revised SMP-30, ODS would agree to defer mining at the SMP-17 site until 2030 or cessation of mining at the SMP-30 site, whichever is later; and
- Conditioned upon the Approval of Revised SMP-17 and Further Revised SMP-30 and the related Lease extensions, ODS would agree to: locate the asphalt and concrete batch plant and storage facilities at the SMP-30 site, rather than on the Apperson Ridge; stockpile and process material mined under SMP-17 at the SMP-30 site, rather than on Apperson Ridge; and transport mined and sized material by conveyor system from Apperson Ridge rather than by trucks on the

haul road, thereby reducing grading, traffic and noise associated with the SMP-17 access road.

If these project changes are approved, the revised mining footprint on the Apperson Ridge would be approximately 116 acres, the revised infrastructure footprint (including equipment storage, conveyors, and storage piles) would be an estimated 10 acres, and the conveyor system footprint would be an estimated 20 acres. If approved by Alameda County and the SFPUC, the proposed changes to the project would reduce the SMP-17 operational mining and infrastructure footprint by about 25 acres as well as reduce the need for grading at Apperson Ridge and along the access road route. Truck traffic would be reduced to a maximum of an estimated 50 to 100 trips per day between Calaveras Road and Apperson Ridge, with no over-the-road trucks hauling extracted rock or other materials or cement and asphalt products on the access road. Much of the proposed access road grading along the 50 foot right of way would not be needed, reducing the road grading footprint by up to approximately 10 acres. In the event that Revised SMP-17 is approved and implemented, this plan provides for mitigations to address the potential impacts to biological resources that would result from construction of the conveyor system, improvements to the access road, and associated facilities.

Measures in this Conservation Plan to enhance habitat for special status species in the vicinity of the Apperson Quarry include:

- ODS will provide CBD and ACA with funding to enable interaction with permitting agencies, monitoring of project impacts, and for efforts to protect wildlife and wild areas in the Bay Area and northern California and to enable the ACA's engaged participation in the development of the federal Habitat Conservation Plan;
- To enhance tule elk, ODS will provide funding to CBD or an entity designated by CBD, to help establish a tule elk reserve in northern California. Additionally, ODS will provide annual funding for elk reintroduction, population enhancement, and/or habitat protection, beginning at the commencement of mining at SMP-17, throughout the duration of the SMP-17 mining project;
- Upon Approval of the SMP-30 Lease, ODS will contribute \$50,000 and will put up a bond or letter of credit in the amount of \$200,000 (with a payment plan over 2 years) or ODS will make escrow or land payments over 2 years (if CBD has a parcel identified for purchase as elk habitat) to CBD to use toward purchase of habitat to help establish a tule elk reserve or to use in conservation efforts for the tule elk in northern California; and
- Conditioned upon Approval of Revised SMP-17 and initiation of mining activities at SMP-17, ODS will commence an annual payment to CBD or an entity designated by CBD of up to \$250,000 for mitigation for potential noise and disturbance impacts to the Sunol tule elk herd.

The Parties further understand and agree that the Conservation Measures described in this Conservation Plan cannot be guaranteed to achieve the desired outcomes in all ways and to the full extent desired by the Parties due to the fluid, complex, and often unanticipated actions of the environment, and to the influence of other natural or human-caused activities on or near the vicinity of the SMP-17 Project Area.

Oliver de Silva, the Alameda Creek Alliance and the Center for Biological Diversity have jointly developed this Conservation Plan with the understanding that implementation of the avoidance, mitigation and conservation measures in the plan represent a significant reduction of the potential biological impacts of the Apperson Quarry mining operations on native species and habitats, offer full and appropriate mitigation for any unavoidable impacts, and provide additional conservation benefits that will improve habitat for native species in the vicinity of the project. The Parties agree to jointly take the position with all government agencies that this Conservation Plan fully addresses all potential species and habitat impacts of the SMP-17 and Revised SMP-17 projects.

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## 1.0 INTRODUCTION AND BACKGROUND

In 1984 Alameda County issued Surface Mining Permit 17 (“SMP-17”) to ODS to allow operation of a hard rock quarry and associated manufacturing facilities located on a lease parcel within the privately owned Apperson Ranch (the Diamond A Ranch), on Apperson Ridge in the Sunol area of unincorporated Alameda County. Mining will occur within a 680-acre leasehold on the 2,555 acre Apperson Ranch, approximately three miles southeast of I-680 and Vallecitos Road and one mile east of Calaveras Road (the “Ranch”). Public lands about the Ranch on three sides: the site drains northward into San Antonio Reservoir, located within the San Francisco Public Utilities Commission (“SFPUC”) watershed lands to the north, northeast and northwest; and Sunol Regional Wilderness, managed by the East Bay Regional Park District (“EBRPD”), is adjacent westerly and southwesterly to the ranch.

The Parties who formulated this Conservation Plan are Oliver de Silva, Inc. (“ODS”), the Alameda Creek Alliance (“ACA”) and the Center for Biological Diversity (“CBD”). ODS, ACA and CBD have reached agreement that the measures in this Conservation Plan will significantly reduce the potential impacts of the Apperson Quarry mining project on native wildlife species and their habitats, fully mitigate for any unavoidable biological impacts, and provide additional conservation benefits for special-status species and their habitats in the vicinity of the SMP-17 project.

### 1.1 Acronyms and Definitions

#### *Acronyms*

ACA = Alameda Creek Alliance  
ACWD = Alameda County Water District  
AWS = Alameda whipsnake  
BGEPA = Bald and Golden Eagle Protection Act  
CBD = Center for Biological Diversity  
CDFG = California Department of Fish and Game  
CEQA = California Environmental Quality Act  
CESA = California Endangered Species Act  
CNDDDB = California Natural Diversity Database  
CNPS = California Native Plant Society  
COA = Conditions of Approval  
CRLF = California red-legged frog  
CTS = California tiger salamander  
CWA = Clean Water Act  
EA = Environmental Assessment  
EBRPD = East Bay Regional Park District  
EIR = Environmental Impact Report  
EIS = Environmental Impact Statement  
EPA = U.S. Environmental Protection Agency  
ESA = Federal Endangered Species Act  
ESA Assoc. = Private consulting firm Environmental Science Associates

FYLF = Foothill yellow-legged frog  
HCP = Habitat Conservation Plan  
ITP = Incidental Take Permit  
MBTA = Migratory Bird Treaty Act  
NCCP = Natural Community Conservation Plan  
NEPA = National Environmental Policy Act  
NMFS = National Marine Fisheries Service  
ODS = Oliver de Silva, Inc.  
RWQCB = Regional Water Quality Control Board  
SFPUC = San Francisco Public Utilities Commission  
USACE = U.S. Army Corps of Engineers  
USFWS = U.S. Fish and Wildlife Service  
WDR = Water Discharge Requirements  
WPT = Western pond turtle  
WRA = Wetland Research Associates

### *Definitions*

“Approval” of a Surface Mining Permit (“SMP”) is defined as completion of all of the following: 1) the issuance of an SMP by the County of Alameda (or other lead agency); 2) approval and execution of any related lease extension by the SFPUC and the San Francisco Board of Supervisors; 3) receipt of any other federal, state or local permits, agreements, contracts certifications (e.g. CEQA documents), entitlements or other approvals reasonably necessary for the development, construction and operation of the SMP, and 4) (a) all administrative and judicial periods for appeal or challenge of the subject SMP, or of any federal, state, or local permits, agreements, contracts, certifications, entitlements or other approvals reasonably necessary for the development, construction, and operation of the subject SMP (“SMP Approvals”) have expired with no appeals or challenges pending, or if any appeals or challenges are pending, as to those SMP Approvals, the resolution of such appeals or challenges in a manner satisfactory to ODS, in its sole discretion, exercised in good faith, or (b) the commencement of mining operations by ODS on the particular SMP site, whichever comes first.

“Conservation Measures” is defined as all of the conservation strategies, including avoidance, minimization, mitigation, and enhancement measures, specifically described in this Conservation Plan.

“Conservation Project(s)” is defined as that combination of environmental protection and enhancement and land management measures, and related funding agreements and plans, set forth in detail in the Conservation Plan(s), intended to protect and enhance the quality and functioning of the regional biological habitat, including wetlands and related lands, of species of interest located within the areas of the Project(s).

“Further Revised Surface Mining Permit 30” (“Further Revised SMP-30”) is defined as the project to be conducted from approximately 2030 until 2064 at the SMP-30 Site and adjoining real property that includes stockpile areas, an aggregate processing plant, an

asphalt plant and a ready-mix concrete plant for receiving, stockpiling and processing sized aggregate from the SMP-17 Site into finished quarry products.

“Lease” means a quarry lease between the City of San Francisco and ODS which will include continuation of SMP-30 operations until 2021, an extension for a period of thirty (30) years for the operation of Revised SMP-30 (if required approvals are obtained) and an extension to 2064 for the operation of Further Revised SMP-30 (if required approvals are obtained).

“Parties” refers to all the parties subject to the Conservation Plan, which are Oliver de Silva, Inc., a California corporation (“ODS”), the Alameda Creek Alliance, a California non-profit corporation (“ACA”), and the Center for Biological Diversity, a New Mexico non-profit corporation (“CBD”).

“Project(s)” is defined as the activities comprised within SMP-30, Revised SMP-30, Further Revised SMP-30, SMP-17 or Revised SMP-17, whichever project is being specifically referenced, or refers to all or some of these projects if they are being referred to collectively.

“Revised Surface Mining Permit 17” (“Revised SMP-17”) is defined as the project comprised of a conveyor system to deliver aggregates mined from SMP-17 and sized for delivery on the conveyor system to the SMP-30 site for processing into asphalt concrete, ready-mix concrete and other construction products.

“Revised Surface Mining Permit 30” (“Revised SMP-30”) is defined as the project comprised of Revised SMP-30 as set forth in the SFPUC’s Request For Proposals (Alternate F), issued December 13, 2005, with operations at the site expanded to a depth of at least 225 feet, with an asphalt concrete plant and a ready-mix concrete plant as ancillary uses.

“SMP-17 Project Area” is defined as the mining and operational footprint at the SMP-17 Site, associated infrastructure (including mining equipment, equipment storage, conveyors and storage piles), the route of the conveyor system, and the access road, along with immediately adjacent areas where there may be impacts from the SMP-17 or Revised SMP-17 mining activities.

“SMP-30 Project Area” is defined as the SMP-30 Site and associated infrastructure, along with immediately adjacent areas where there may be impacts from the SMP-30, Revised SMP-30 and Further Revised SMP-30 activities.

“SMP-17 Site” means the 680 acre parcel defined as the Property in that Mineral Lease Agreement dated August 30, 1983 between William W. Apperson as Lessor and ODS as Lessee (the “Mineral Lease Agreement”), along with all easements and other interests granted Lessee in the Mineral Lease Agreement and all amendments thereto.

“SMP-30 Site” means that 315-acre parcel (6527 Calaveras Road, Sunol, California; APN 96-375-009) for which quarrying is authorized pursuant to Surface Mining Permit 30 (“SMP-30”); and if Revised SMP-30 is approved by the County of Alameda and the City, the

expansion area of 58 acres; and if Approval of Further Revised SMP-30 is achieved, the areas of adjacent real property needed for access, conveyor systems and stockpile areas.

“Surface Mining Permit 30” (“SMP-30”) is defined as the existing mining operation under lease from the SFPUC in the Sunol Valley.

“Surface Mining Permit 17” (“SMP-17”) is defined as the Apperson Quarry hard rock mining project approved by Alameda County in 1984.

“Shared with Groups” (as used in Appendix C) means a written and electronic copy provided to the Conservation Groups not later than the time of submission to the public agencies, which after receipt by the Conservation Groups shall not be confidential and may be disclosed as the Conservation Groups find necessary.

“Qualified” (as used to modify biologist, consultant, expert, and other terms) shall mean licensed as appropriate, possessing sufficient specialized expertise as necessary, and as reasonably approved in advance by the Conservation Groups (or as deemed approved with sufficient prior notice and no timely disapproval).

## **1.2 Description of Permitted SMP-17 Project**

The Apperson Quarry (SMP-17) project as approved by Alameda County in 1984 includes: the quarry; plants and facilities for production and retail sales of aggregate, asphalt, and concrete; equipment storage yards; administrative offices; and scalehouses. The Apperson Quarry is a combination of pit, hilltop, and side-hill mining operation to remove 123 million tons (49.2 million cubic yards) of basalt for manufacture and retail sale of aggregate, asphalt and concrete, through 2064. The footprint of the mining area is approximately 116 acres. The project as approved in 1984 included grading and leveling of about 25 additional acres to allow siting of asphalt and concrete plants and other operations adjacent to the mining footprint.

The principal method for extraction of material from Apperson Ridge is by removing the rock from the ground with a bulldozer and by blasting. Blasting is expected to occur about three times per week when large rocks and hard deposits are encountered. Anticipated decibel levels from blasting, the crusher, and other mining activities range from 47 decibels to up to 99 decibels at 300 feet, with estimated attenuation from distance and terrain producing an estimated maximum of 42 decibels at Welch Creek Road, Maguire Peaks, and northern portions of Sunol Wilderness, and a maximum of 32 decibels at Sunol Regional Park picnic area.

Extracted rock is to be transported by wheeled haul trucks to an on-site processing area for screening, crushing, storage, transfer to over-the-road trucks, and for the manufacture of asphalt concrete and cementitious concrete. The quarry trucks on the haul road were predicted to be audible from a distance of up to 2,000 feet.

The processing plants include on-site use of the following equipment:

- 1 Grizzly with water spray
- 1 Jaw Crusher with water spray
- 1 Cone Crusher with water spray
- 1 Gyro Disc Crusher with water spray
- 5 screens with water sprays
- 2 stacker conveyors with water sprays
- 24 conveyors (on-site only) for transport of materials on site
- 1 asphalt concrete plant
- 1 cement storage silo
- 1 concrete batch plant mixer
- 1 concrete weigh hopper

It is understood among the Parties that the technologies for operating SMP-17 and SMP-30 during the time period contemplated by this document may evolve and change, and that the listing of applied equipment above may therefore change over time.

Eleven product storage piles will be on site along with 8 load out bunkers occupying approximately 14 acres of the plant area, located near the asphalt and concrete plants. The asphalt and concrete plants are for operation on a demand basis.

Mining will normally occur Monday through Friday between the hours of 6:00 am and 6:00 pm and during daylight hours, whichever is longer, with weekend operation allowed with advance notice to the County. Processing and secondary crushing of the raw material is to be done 24 hours per day, seven days per week. Hauling of finished products off-site would occur Monday through Friday between the hours of 6:00 am and 6:00 pm, with weekends allowed with advance notice to the County.

Access to the site is from a new road located generally in a private access easement which traverses approximately 2.8 miles of SFPUC watershed lands from Calaveras Road to the Apperson Ranch boundary and then 1.9 miles of the Ranch to the quarry plant site. The access road would be constructed within a 50 foot right of way plus additional grading for slopes. It would have a design speed of 35 mph.

Per the 1984 Environmental Impact Report for the project, the average daily truck traffic during the construction season would be 1,060 trips per day (530 in and 530 out) and total vehicular traffic would average 1,160 daily trips.

Gas, electric and phone service would be provided to the site. Sewage disposal would be provided by either the use of holding tanks for disposal at an approved off-site location or septic tank/leachfield systems.

### **1.3 Existing Agreements and Mitigations**

*Alameda County Conditions of Approval*

When Alameda County approved SMP-17 in 1984, it also required 62 Conditions of Approval (“COA”) for the permit (Alameda County 1984). See Exhibit \_\_\_\_, attached to this document, containing the Conditions of Approval and the Resolution for approval of SMP-17. A number of these conditions relate to potential impacts to biological resources, including:

- Restrict and minimize lighting for night operations (condition 15)
- Submit a program for maintaining agricultural use over the remainder of the lease area not actively mined (condition 21)
- Abide by the terms and conditions of the 1984 mitigation agreement with the EBRPD (condition 22)
- Portions of the royalty payments to EBRPD detailed in the 1984 mitigation agreement shall go into a fund to purchase the remainder of the Apperson property not under lease (condition 23)
- Implement an approved soil erosion and sediment control plan (condition 28)
- Prevent any increased offsite discharge of pollutants (condition 34)
- Implement an approved water quality maintenance plan (conditions 35 and 36)
- Restore and enhance oak woodland and riparian habitat affected by mining operations (condition 44)
- Tule elk mitigation program (condition 45)
- Reclaim the quarry pit after mining to create cliff nesting habitat for raptors and vegetation to benefit wildlife (conditions 26 and 47)
- Create an Alameda County Ridgeland Birds of Prey Reserve (condition 48)
- Obtain a federal permit, if required, for any disturbance of golden eagle nesting (condition 49)
- California red-legged frog impact mitigation program (condition 50)
- Noise reduction measures (conditions 52-55)

The Tule Elk Mitigation program (condition 45), requires that a program for mitigating quarrying impacts on the San Antonio tule elk herd be developed prior to commencement of grading, mining operations, or construction activities. This mitigation program was to be developed in coordination with the California Department of Fish and Game (“CDFG”) and approved by the Alameda County Planning Director. The program was to cover acquisition of suitable elk habitat, relocation of elk from another part of the state, and monitoring of the new and existing elk herds. Condition 45 was modified at a County Planning Commission hearing in 1995 after a change in CDFG policy concerning elk relocation.

The County published updates to the several of the mitigation conditions, including conditions 45 and 50, in 2003 (WRA 2003a-d, included here by reference)..

A revised mitigation program, Apperson Ridge Quarry Tule Elk Mitigation Program Condition 45, was adopted by Alameda County in 2003. The Alameda County mitigation requires monitoring of the elk herd during initial phases of construction and after construction to determine elk use and movement patterns in the Project Area, and construction of fences and underpasses as needed to allow for movement of elk within the Project Area. Tule elk reports conducted on behalf of the permittee (Duke et al. 2003; Harvey and Stanley 1987), the 1984 Environmental Impact Report (“EIR”) for the project (Alameda

County 1984), and the 2003 updated mitigation measure (WRA 2003c) concluded that the San Antonio tule elk herd was likely to be displaced as a result of the proposed quarry operation on Apperson Ridge and that “elk who are continuously displaced from their home ranges suffer low birth rates and energy loss associated with less than optimal foraging” (Harvey and Stanley 1987). This Conservation Plan contains additional tule elk mitigation measures that are designed to reduce potential noise impacts, attempt to prevent displacement of elk, and mitigate for any potential impacts.

The California red-legged frog avoidance program (condition 50) required that a program for mitigating quarrying impacts on the red-legged frog be developed prior to commencement of grading, mining operations, or construction activities. Since the approval of SMP-17, the red-legged frog has been federally listed as threatened and critical habitat has been designated. The Apperson Ridge California red-legged frog avoidance and mitigation program was adopted by Alameda County in 2003. The County’s new frog mitigation measures in this program attempts to avoid any direct or indirect take of individual frogs through avoidance and establishment of buffer areas. This Conservation Plan contains additional red-legged frog mitigation measures that are designed to further reduce potential impacts on frogs and fully mitigate for any habitat loss.

Since final approval in 1984, ODS has been in the process of implementing some of the terms of SMP-17 and the required mitigations. ODS activities to date have included making payments to the County of Alameda, filing required reports, posting insurance policies and performance bonds, performing road maintenance, conducting boring and other geotechnical analysis, preparing access road and erosion control plans, preparing a water quality monitoring and control plan, preparing improvement plans for the Calaveras Road intersection, and preparing geotechnical reports covering grading, road and plant construction, and slope stability. ODS has also prepared a post-reclamation habitat plan for cliff dwelling raptors and quarry pond habitat, an oak woodland restoration program, a tule elk mitigation and monitoring program, and a noise mitigation and landscaping plan relating to the impact of the haul road on McGuire Peaks.

ODS will comply with all existing conservation measures contained in the Alameda County COA for the SMP-17 project (as modified by the County) and those imposed by the County in the future. Where measures in this conservation plan for SMP-17 are more stringent than the COA, ODS shall also be responsible for complying with the applicable measures in this Conservation Plan.

#### *Agreement With EBRPD*

In 1984 ODS signed an agreement with the East Bay Regional Park District (EBRPD) regarding the Apperson Quarry. The agreement included measures that restrict the extent of quarrying on Apperson Ridge, configure quarrying activities to reduce visual and noise impacts on adjacent Regional Parks, may add 320 acres of private lands to the EBRPD, give the EBRPD first right of refusal for purchasing non-quarry lands on the Apperson Ranch, maintain the agricultural zoning of the 680 acre Apperson lease parcel for the duration of the



SMP-17 lease, provide royalties to the EBRPD to purchase and preserve additional lands as mitigation for biotic impacts, and provided mitigation payments for peregrine falcon reintroduction and surveys as compensation for impacts to raptors. Reference is made to those agreements for their terms, which generally are intended to further mitigate the potential impacts of SMP-17

The royalties on tonnage and the potential dedication of up to 320 acres of land to the EBRPD was intended as mitigation for biotic impacts. The estimated \$6 million in royalties (as of 1984) was for use by the EBRPD to purchase and preserve lands suitable as habitat for the various impacted species.

ODS signed a side agreement with the Apperson Ranch owner that allows ODS to terminate the provisions of the EBRPD agreement regarding the right of refusal and the agreement to not rezone if the quarry was not operating by 1987. As part of this Conservation Plan, subject to Approval of Revised SMP-17 and Further Revised SMP-30, and commencement of mining at SMP-17, ODS is committing not to exercise the right of termination based on the failure to commence operations by 3/31/87 and to comply with all existing conservation measures and other terms of the 1984 agreements with the EBRPD.

The EBRPD agreement has a provision that none of the stationary quarry facilities, including without limitation the batch and asphalt plants, shall be located outside their approved footprint within the quarry site, except and until the surface mining permit is amended by Alameda County, with the EBRPD to be consulted on the final location. ODS will be seeking approval of Revised SMP-17 to allow locating these facilities off site and will consult with the EBRPD on the location of these facilities within the SMP-30 quarry site (see measure CHANGE-6).

ODS signed an agreement with the EBRPD and conservation groups that provided for substantial mitigation payments as compensation for presumed impacts to raptors. These payments were in the form of lump sum payments to the EBRPD and ongoing royalties to the EBRPD that would begin when the quarrying operation begins at SMP-17. ODS has already paid for raptor studies and enhancements through the University of California at Santa Cruz Predatory Bird Research Group, including annual raptor surveys and funding for a program of reintroduction of peregrine falcons in the East Bay.

#### *Agreement With Conservation Groups*

In 1984 ODS also entered into agreements with non-profit conservation groups, the San Francisco Bay Chapter of the Sierra Club, Friends of the Earth, Ohlone Audubon Society, and Preserve Area Ridglands Committee. The agreements contained provisions relating to the environmental groups' withdrawal of objections to the issuance of the SMP-17 permit. Under the agreements the conservation groups waived all rights to pursue further action against the quarry and agreed to support the project's mitigation measures to certain public agencies such as Alameda County and the SFPUC.

## *SFPUC Lands*

At the request of the SFPUC, since 1984 ODS has performed maintenance on the existing access roads and the associated road-side drainage swales and has provided associated erosion control measures as necessary on SFPUC property.

## *Recent Developments*

In 2007 ODS approached the Alameda Creek Alliance with a proposal to seek approval of Revised SMP-17, in part, to significantly reduce the potential impacts of the SMP-17 quarry. In 2007 the Alameda Creek Alliance and the Center for Biological Diversity began discussions with ODS about how to reduce the potential impacts of the Apperson Quarry and additional mitigation and enhancement measures that could be added to the SMP-17 project.

### **1.4 Conservation Measures and Proposed Changes to the Project**

This Conservation Plan is a cooperative agreement to substantially mitigate and reduce the potential environmental impacts of the currently approved SMP-17 so long as certain conditions are met. The first component of this plan is a set of conservation measures designed to address the potential impacts of mining activities on SMP-17. These measures, which are set forth in detail in Section 2 below, include the following:

- Purchase by ODS of a private parcel or parcels of land or conservation easements of at least 600 acres to satisfy all direct or indirect losses of habitat identified herein, within two (2) years prior to initiation of mining at SMP-17, if DeSilva has received all Approvals for SMP-17, Revised SMP-17 and Further Revised SMP-30 by that time. This acquisition will be credited against the mitigations called for in this plan;
- Mitigation of permanent habitat loss due to the footprint of mining and infrastructure through purchase and permanent protection of similar habitats on private land, at a preservation ratio of 3:1;
- Full preservation of occupied breeding habitat for several focal species (California red-legged frog, California tiger salamander and nesting raptors) and occupied scrub habitat for the Alameda whipsnake at a minimum 4:1 preservation ratio;
- Mitigation of temporary habitat loss through purchase and permanent protection of similar habitats on private land, at a 1:1 preservation ratio; or with enhancement of similar habitats on protected public land, at a 2:1 preservation ratio;
- Adoption of a tule elk mitigation and monitoring plan;
- Initiating a federal Habitat Conservation Plan that will include mitigation measures for unavoidable potential impacts to special-status species;
- Focused species surveys for key special-status species to determine their presence and the extent of suitable habitat in the Project Area;

- Stockpiling rock mined from SMP-17 to allow for potential seasonal constraints on blasting operations to minimize noise disturbance to tule elk, nesting raptors, and other wildlife;
- Measures to exclude special status species from mining and equipment areas before construction, and in some cases, relocation of individual animals or plants before mining activities; and
- A commitment to reduce the greenhouse gas emissions of the Apperson Quarry project and purchase approved carbon offsets in accordance with GG-1.

The habitat mitigation commitments set forth in this Conservation Plan can be satisfied simultaneously for individual species or habitat types through the preservation or purchase of habitat lands meeting multiple functions. For example, if ODS is required to replace 0.25 acre of California red-legged frog breeding habitat at a 4:1 ratio and 0.25 acre of California tiger salamander breeding habitat at a 4:1 ratio (for a total preservation acreage of 1 acre for each species), ODS is entitled to satisfy both mitigation commitments simultaneously through the purchase or preservation of one total acre of habitat that serves as breeding habitat for both species. Moreover, ODS is entitled to utilize habitat existing on the minimum 600-acre parcel(s) it is committing to purchase (in fee or with conservation easements) to satisfy its other mitigation commitments for either individual species mitigation or for habitat type mitigation.

The second component of this plan is a set of project changes to SMP-17 that ODS will propose to Alameda County and the SFPUC as part of an application for Revised SMP-17. As described in Section 2.3.1 below, the application for the Revised SMP-17 project will include the following:

- Conditioned on Approval of Revised SMP-30, ODS will agree to defer mining at the SMP-17 site until 2030 or cessation of mining at the SMP-30 site, whichever is later. Improvements and facilities for SMP-17 may be constructed during the two (2) years prior to commencement of mining at SMP-17, but not before 2028;
- Location of asphalt and concrete batch plant and storage facilities at the Sunol Valley SMP-30 mining site, rather than on the Apperson Ridge;
- Stockpiling and processing of material mined under SMP-17 at the Sunol Valley SMP-30 mining site, rather than at Apperson Ridge; and
- Transportation of mined material by conveyor system rather than by trucks on the haul road, thereby reducing grading, traffic and noise associated with the SMP-17 access road.

These conservation measures and proposed changes comprising Revised SMP-17 constitute a substantial reduction in potential environmental impacts over the currently approved Apperson Quarry permit. Through this Conservation Plan and proposed changes that will be incorporated into the Revised SMP-17 project, the parties are providing additional avoidance, mitigation and enhancement measures.

## 1.5 Regulatory Framework

This Conservation Plan addresses mining activities under SMP-17 and Revised SMP-17, with appropriate avoidance and mitigation measures to protect biological resources, and additional conservation measures to benefit special-status species in the vicinity of mining operations. This Conservation Plan is also intended to serve as the basis for a federal Habitat Conservation Plan (“HCP”) under the federal Endangered Species Act (“ESA”) addressing the mining activities at Apperson Quarry. ODS will have the option to obtain incidental take authority for SMP-17 and/or Revised SMP-17 either by using the HCP as a basis for a Section 10 incidental take permit or by using the consultation provisions of Section 7 of the ESA regarding potential impacts to listed species for activities subject to approval by the U.S. Fish and Wildlife Service (“USFWS”) and the National Marine Fisheries Service (“NMFS”), if necessary.

### *Federal Endangered Species Act*

Section 9 of ESA prohibits the unauthorized “take” of any fish or wildlife species listed under the ESA as endangered and many species listed as threatened. *Take*, as defined by the ESA, means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” *Harm* is defined by regulation as “any act that kills or injures the species, including significant habitat modification.” All or some forms of take of threatened species are prohibited by regulation at the time of listing. Exceptions to these prohibitions on take are addressed in Section 7 (for federal actions) and Section 10 (for nonfederal actions) of the ESA.

Section 10 of the ESA authorizes the issuance of an incidental take permit to nonfederal project proponents upon completion of an approved Habitat Conservation Plan (“HCP”). In cases where federal land, funding, or authorization is not required for an action by a nonfederal entity, the take of listed species must be permitted by USFWS through the Section 10 process. Private landowners, corporations, state agencies, local agencies, and other nonfederal entities must obtain a Section 10(a)(1)(B) incidental take permit for the take of federally listed fish and wildlife species “that is incidental to, but not the purpose of, otherwise lawful activities.” Section 9(a) of the ESA contains limited protections relating to endangered and threatened plants appearing on nonfederal lands. Accordingly, this Conservation Plan covers plants that are federally or state listed as well as other plants. To the extent necessary and appropriate, ODS will be seeking federal and state incidental take authority for listed plants through the HCP and otherwise. To receive an incidental take permit, the nonfederal entity is required under Section 10(a)(2)(A) to prepare an HCP that identifies expected take amounts, mitigation measures, and funding sources to implement the measures specified in the HCP. Issuance of an incidental take permit by USFWS is a federal action that will be subject to an internal USFWS Section 7 consultation. The agencies examine the HCP to ensure that it accurately documents the expected impacts of their federal action (i.e., issuance of a take permit) as well as the mitigations proposed to compensate for those impacts.

This Conservation Plan provides mitigations and conservation actions that can also serve as the foundation for an HCP to authorize and mitigate for potential incidental “taking” of endangered species during the Apperson Ridge project. The Parties agree that the mitigations and conservation actions in this Conservation Plan are sufficient to mitigate for all potential impacts to all federal and state listed species, and all other species that are identified herein as potentially affected by the SMP-17 and Revised SMP-17 projects. This Conservation Plan covers avoidance, mitigation and conservation measures for 5 species that are federally listed as Endangered under the federal ESA, 4 species that are listed as Threatened under the federal ESA, 18 species that are listed as federal Species of Concern, 3 species that are listed as Endangered under the California Endangered Species Act (“CESA”), 3 species that are listed as Threatened under the CESA; 3 species that are state listed as Fully Protected Species, and 22 species that are listed as state Species of Concern. Not all of these species may occur on the Apperson Quarry project site, though they have the potential to occur there or in the vicinity of the quarry. This plan also covers a number of other species with no formal state or federal listing, but that are deemed important components of the local environment.

If and when the Revised SMP-17 project is approved by Alameda County and the SMP-30 Lease is extended until 2064, ODS will initiate a Section 10 incidental take permit process, using an HCP, with the USFWS for the Apperson Quarry project, SMP-17 and Revised SMP-17. If the HCP successfully results in the issuance of an incidental take permit by the USFWS, with terms satisfactory to ODS, ODS will implement the provisions of the HCP before and during SMP-17 mining, in accordance with the timelines of the HCP. If USFWS does not issue an incidental take permit for SMP-17 or Revised SMP-17 pursuant to the HCP, then, if ODS elects not to proceed with mining at the SMP-17 Site, ODS shall have no further obligation to implement any of the provisions of this Conservation Plan relating to these projects. However, if ODS proceeds with mining at the SMP-17 Site, ODS will be responsible for implementing the provisions of this Conservation Plan before and during mining at the SMP-17 Site, in accordance with this Conservation Plan. The HCP is discussed more fully in Section 2.2 below.

#### *California Endangered Species Act (CESA)*

The CESA protects wildlife and plants listed as threatened and endangered by the California Fish and Game Commission. The CESA prohibits the take of state-listed wildlife and plants and requires an incidental take permit for authorization of take. The California Fish and Game Commission defines *take* as any action or attempt to “hunt, pursue, catch, capture, or kill.” The requirements for an application for an incidental take permit under CESA are described in Section 2081 of the California Fish and Game Code and in final adopted regulations for implementing Sections 2080 and 2081.

The parties recognize that ODS may be seeking State of California incidental take permits and authorizations under CESA for a variety of species and that ODS, at its option, is

authorized to utilize a full range of available options for obtaining those permits and authorizations. ODS may utilize the incidental take permit processes currently set forth in Fish and Game Code Sections 2080.1 and/or 2081, and/or it may utilize the provisions of the Natural Community Conservation Planning Act currently set forth at Fish and Game Code Sections 2800-35. ODS may also choose to prepare a joint federal HCP and California NCCP document, or it may utilize other mechanisms available at any time for obtaining CESA incidental take authorization. The Parties agree that ODS shall have the discretion to use any, or a combination, of these mechanisms at any time and that ACA and CBD will support any CESA approach that ODS chooses.

#### Other Federal and State Wildlife Regulations

Activities at Apperson Quarry may be regulated by other federal and state wildlife regulations, including the federal Migratory Bird Treaty Act (“MBTA”), the federal Bald and Golden Eagle Protection Act (“BGEPA”), California Fish and Game Code sections regulating Fully Protected Species, and California Fish and Game Code sections for the protection of birds and their nests.

##### *Migratory Bird Treaty Act (MBTA)*

Under the MBTA, unless otherwise permitted by regulations (e.g., hunting), the taking of, killing, or possessing migratory birds is unlawful as is taking of any parts, nests, or eggs of such birds (16 U.S. Code [USC] 703). For those species that are listed as threatened or endangered under the ESA and also protected by the MBTA, the USFWS has issued guidelines (HCP Handbook Appendix 5: FWS Guidance on Addressing Migratory Birds and Eagles) on complying with both statutes. Per USFWS guidance, an HCP incidental take permit also constitutes a Special Purpose Permit under Title 50 Code of Federal Regulations (CFR) Section 21.27 for the take of all migratory birds on the permit, with the amount and/or number subject to the terms and conditions specified. Any such take would not be in violation of the Migratory Bird Treaty Act of 1918, as amended (16 USC Sections 703–712). This Conservation Plan provides measures to avoid and minimize potential impacts on migratory birds, which can be used in an HCP to provide coverage under the MBTA.

##### *Bald and Golden Eagle Protection Act (BGEPA)*

The BGEPA prohibits the taking or possession of and commerce in bald and golden eagles, with limited exceptions. Under the BGEPA it is a violation to “...take, possess, sell, purchase, barter, offer to sell, transport, export or import, at any time or in any manner, any bald eagle commonly known as the American eagle, or golden eagle, alive or dead, or any part, nest or egg, thereof...” *Take* is defined to include pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, and disturb. In 1996, the USFWS clarified that an incidental take authorization under Section 7 or Section 10 of ESA can include authorization for take under the BGEPA. An incidental take permit issued under Section 10 covering bald eagles will include the following language: “The U.S. Fish and Wildlife Service will not refer the incidental take of any migratory bird or bald eagle for prosecution under the Migratory Bird Treaty Act of 1918, as amended (16 USC 703–712), or the Bald and Golden Eagle

Protection Act of 1947, as amended (16 USC 668–668-d), if such take is in compliance with the terms and conditions (including amount and/or number) specified herein.” This Conservation Plan provides measures to avoid and minimize potential impacts on eagles, which can be used in an HCP to obtain a Section 10 permit or as the basis for a Section 7 consultation to obtain incidental take authority to provide coverage under the BGEPA.

#### *California Fish and Game Code Sections for Fully Protected Species*

The classification of Fully Protected was the state of California’s initial effort in the 1960s to identify and provide additional protection to those animals that were rare or faced possible extinction. Species for which the CDFG may not authorize take, except for scientific research, are described in Sections 3511 (fully protected birds), 4700 (fully protected mammals), 5050 (fully protected reptiles and amphibians), and 5515 (fully protected fish) of the California Fish and Game Codes. These protections state that “...no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected [bird], [mammal], [reptile or amphibian], [fish]...” Three fully protected bird species are known to occur in the vicinity of the Apperson Quarry: the golden eagle, white-tailed kite, and American peregrine falcon. The SMP-17 project is not expected to cause any take of any of these fully protected species. This Conservation Plan provides measures to avoid potential impacts to fully protected species.

#### *California Fish and Game Codes for Protection of Birds and their Nests*

Section 3503.5 of the Fish and Game Code prohibits the take, possession, or destruction of any birds of prey or their nests or eggs. The CDFG may issue regulations authorizing take. The SMP-17 project is not expected to cause the take of any birds of prey or their nests or eggs. This Conservation Plan provides measures to avoid and minimize potential impacts on birds of prey and their nests.

#### *Federal and State Water and Wetland Laws and Regulations*

##### *Clean Water Act Section 404*

Section 404 of the federal Clean Water Act (“CWA”) provides the U.S. Army Corps of Engineers (“USACE”) with authority to issue dredge and fill permits. The CWA is the primary federal law that protects the quality of the nation’s surface waters, including lakes, rivers, and coastal areas. The CWA regulates discharges into the nation’s waters, making unlawful any discharge of pollutants from a point source not specifically authorized by a permit; issuance of such permits constitutes the CWA’s principal regulatory tool. Section 404 of the CWA regulates the discharge of dredged or fill material into waters of the United States, including wetlands. ODS may or may not need a Section 404 permit for either the SMP-17 and/or the Revised SMP-17 project(s).

##### *California Department of Fish and Game Streambed Alteration Agreement*

The CDFG regulates work that could substantially affect resources associated with rivers, streams, and lakes in California, pursuant to California Fish and Game Code Sections 1600–1607. Any action that substantially diverts or obstructs the natural flow of, or substantially changes or uses any material from the bed, channel or bank of any river, stream or lake, or deposits or disposes of debris, waste or other material containing pavement where it may pass into any river stream or lake requires a Lake or Streambed Alteration Agreement.

The activities under the SMP-17 and/or the Revised SMP-17 project may or may not require a Streambed Alteration Agreement. Additional coordination with the USACE under Section 404 of the CWA or the Regional Water Quality Control Board under Section 401 of the CWA may also be required for specific activities that could affect such waters.

#### Federal and State Environmental Quality Acts

##### *National Environmental Policy Act (NEPA)*

Issuance of a USACE 404 permit and/or an incidental take permit by the USFWS under the ESA Section 10 would constitute a federal action that requires compliance with the National Environmental Policy Act (“NEPA”). NEPA requires federal agencies to include in their decision-making process appropriate and careful consideration of all environmental effects of a proposed action and of possible alternatives. If an exemption does not apply, documentation of the environmental impact analysis and efforts to avoid or minimize the adverse effects of proposed actions must be made available for public notice and review. This analysis is documented, unless not required (as, for example, if a nationwide permit is utilized), in either an environmental assessment (“EA”) or an environmental impact statement (“EIS”). To satisfy NEPA requirements, an EA or EIS would be required for the issuance by the USACE of an individual 404 permit, but not for issuance of a nationwide permit, and for the approval of an HCP by the USFWS.

##### *California Environmental Quality Act (CEQA)*

CEQA requires that significant environmental impacts of proposed projects be reduced to a less-than significant level through adoption of feasible avoidance, minimization, or mitigation measures, unless overriding considerations are identified and approved. Alameda County will likely be the lead agency under CEQA for the Revised SMP-17 project. This Conservation Plan will support preparation of CEQA documents for the Revised SMP-17 project by providing mitigation measures proposed to compensate for potential impacts.

SMP-17 was approved by Alameda County in 1984, when an environmental review was completed under CEQA. Alameda County updated the Conditions of Approval for the permit in 2003 (WRA 20003a-d). This Conservation Plan includes additional avoidance, mitigation, and conservation and enhancement measures for biological resources within and in the vicinity of the Apperson Ridge quarry, including listed and sensitive wildlife and plant species and their habitats. The Parties agree that with the implementation of this Conservation Plan, and approval of an environmental review document under CEQA for the



Revised SMP-17 project, the environmental review for the Apperson Quarry project will be adequate and complete and will not be challenged by CBD or ACA in any forum.

If and when Revised SMP-30 and an extended lease for the SMP-30 site are approved, ODS will seek approval for the Revised SMP-17 project from the lead agency, Alameda County. The application(s) for the Revised SMP-17 project will be submitted to the County of Alameda within one (1) year of the date of the Revised SMP-30 lease extension. Alameda County will conduct the environmental review under CEQA for the Revised SMP-17 project. ODS will request any needed modifications to Alameda County's Conditions of Approval to incorporate the changes in the project and the avoidance, mitigation and conservation measures for Revised SMP-17 contained in this Conservation Plan.

Within one (1) year of approval of the Revised SMP-30 lease extension, ODS will hire a consultant, reasonably approved by all parties, to perform protocol-level biological surveys for all special status species at the SMP-17 mining area, Revised SMP-17 (including all potential conveyor routes), and immediately adjacent areas. Federal and state (if appropriate) protocol-level surveys for the presence or absence (unless the Parties agree species presence is already established or can be presumed) and suitable habitat of all potentially occurring special status species will be conducted by the consultant. The surveys will be conducted at times that will cause them to be valid and timely when applications for approvals are pending. ODS will also hire a consultant, reasonably approved by all parties, to conduct surveys of the San Antonio tule elk herd to determine the population status and trends, and habitat needs. These surveys, which are discussed more fully in Section 2.3, will be performed as and when required for project approvals.

The ACA and CBD will support the permit approvals and lease agreements needed for SMP-17 and Revised SMP-17, but shall not be prohibited from participating in and commenting on the environmental review processes for Revised SMP-17, provided that such participation and comments are consistent with all agreements with ODS and consistent with ACA's and CBD's commitment to support the Revised SMP-17 project. The ACA and CBD shall not be prohibited from participating in any action or administrative process related to violations by ODS of any terms of the Surface Mining Permits, the federal incidental take authority to the extent allowed by law, state or federal laws, and/or this Conservation Plan.

#### Other Required Permits

##### *Regional Water Quality Control Board Permit*

In 1985 ODS was issued Order No. 85-97 by the Regional Water Quality Control Board ("RWQCB") providing Waste Discharge Requirements ("WDRs") for SMP-17. The RWQCB has requested that ODS update the WDRs and file a Report on Waste Discharge at least 140 days before a discharge occurs in connection with the SMP-17 project. ODS has responded to the RWQCB, confirming that it will comply with the requirement and will update the WDRs as necessary and appropriate when the project moves forward.

## **1.6 Conservation Plan Area**

This Conservation Plan covers activities within the SMP-17 and Revised SMP-17 projects, and adjacent areas where there may be indirect impacts. It also covers portions of private and SFPUC lands where the conveyor system (if approved) would be located, although the specific route of the proposed conveyor system has not yet been determined. This plan also covers off site areas where there may be indirect impacts from quarrying activities, such as noise, dust, or erosion. This Conservation Plan briefly discusses activities at the SMP-30 lease locations, however the environmental review and mitigations for the SMP-30 and Revised SMP-30 projects are not part of this Conservation Plan. See the project location maps in Appendix D.

## **1.7 Environmental Setting**

See Appendix A for a full discussion of the environmental setting of the Apperson Quarry, including climate, topography and geology, hydrology, vegetation, habitat types, and wildlife of the Project Area.

### *Existing Land Use*

The Apperson Ranch, including the SMP-17 mining lease area, is currently zoned for agricultural use and is used for cattle grazing. Public lands adjacent to the mining site are dedicated as watershed lands managed by the SFPUC and park lands managed by the EBRPD. Most of the SFPUC lands and EBRPD lands adjacent to the Project Area are leased for cattle grazing. A 680 acre parcel of the Apperson Ranch was approved for a hard rock quarry operation in 1984. In 1984 agreements signed with the EBRPD, ODS and the Apperson landowner agreed not to seek to re-zone this 680 lease parcel for the term of the lease. ODS reaffirms its contractual commitments in this Conservation Plan.

## **1.8 Species Covered by the Conservation Plan**

There are records of 53 special-status wildlife and plant species occurring within the regional vicinity of Apperson Ridge, according to the California Natural Diversity Database (CNDDDB) and biological literature for the region (CDFG 2007; USFWS 2007). The Project Area potentially has suitable habitat for 28 of these 53 species. This Conservation Plan covers 9 species listed under the federal Endangered Species Act, 6 species listed under the California Endangered Species Act, and other species that are currently unlisted but have the potential to be listed within the next fifty years. See Appendix B for a full discussion special-status species that may occur in the vicinity of the project.

The special-status species discussed below have a potential to be present in the Project Area. This Conservation Plan provides avoidance or full mitigation measures for potential impacts to these species and their habitats. Before any mining activity at SMP-17, a consultant hired by ODS and approved by all parties will conduct protocol-level surveys to determine the presence/absence of several key special-status species (particularly the San Joaquin kit fox, Berkeley kangaroo rat, Callippe silverspot butterfly, Bay checkerspot butterfly, nesting

raptors, and endemic plant species), as well as the location and extent of suitable habitat for these species. The mitigations described in Section 2 will be implemented based on the presumed or demonstrated presence of special-status species and the extent of suitable habitat. This implementation is undertaken with the expectation of achievement of the outcomes specified in this Plan, but with the understanding among the Parties that ODS cannot and does not guarantee the long term success of these outcomes. The following special-status species are covered in this plan, and their federal and state listing status, if any, is given:

FE = Federal Endangered	SE = State Endangered
FT = Federal Threatened	ST = State Threatened
FSC = Federal Species of Concern	SSC = State Species of Concern
BGEPA = Bald and Golden Eagle Protection Act	SFPS = State Fully Protected

San Joaquin kit fox (*Vulpes macrotis mutica*); FE/ST  
Tule elk (*Cervus elaphus nannodes*)  
Mountain lion (*Puma concolor*)  
San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*); FSC/SSC  
Berkeley kangaroo rat (*Dipodomys heermanni berkeleyensis*); FSC  
American badger (*Taxidea taxus*); SSC  
Townsend's western big-eared bat (*Corynorhinus townsendi townsendii*); FSC/SSC  
Long-eared myotis (*Myotis evotis*); FSC  
Fringed myotis (*Myotis thysanodes*); FSC  
Long-legged myotis (*Myotis volans*); FSC  
Yuma myotis (*Myotis yumanensis*); FSC  
Pallid bat (*Antrozous pallidus*); SSC  
Western red bat (*Lasiurus blossevillii*); SSC  
Hoary bat (*Lasiurus cinereus*); SSC  
American peregrine falcon (*Falco peregrinus anatum*); SE, SFPS  
Bald eagle (*Haliaeetus leucocephalus*); BGEPA/SE  
Golden eagle (*Aquila chrysaetos*); BGEPA/SSC, SFPS  
Tricolored blackbird (*Agelaius tricolor*); FSC/SSC  
Western burrowing owl (*Athene cunicularia hypugaea*); FSC/SSC  
Ferruginous hawk (*Buteo regalis*); FSC/SSC  
Long-eared owl (*Asio otus*) (nesting); SSC  
California horned lark (*Eremophila alpestris actia*); SSC  
Prairie falcon (*Falco mexicanus*); SSC  
Cooper's hawk (*Accipiter cooperi*); SSC  
Sharp-shinned hawk (*Accipiter striatus*); SSC  
Loggerhead shrike (*Lanius ludovicianus*); SSC  
Bell's sage sparrow (*Amphispiza belli belli*) (nesting); SSC  
White-tailed kite (*Elanus leucurus*); SFPS  
Great blue heron (*Ardea herodias*)  
California tiger salamander (*Ambystoma californiense*); FT/ SSC  
California red-legged frog (*Rana aurora draytonii*); FT/ SSC  
Foothill yellow-legged frog (*Rana boylei*); FSC/SSC  
Alameda whipsnake (*Masticophis lateralis euryxanthus*); FT/ST

Western pond turtle (*Actinemys marmorata*); FSC/ SSC  
California horned lizard (*Phrynosoma coronatum frontale*); FSC/ SSC  
Rainbow trout (*Oncorhynchus mykiss irideus*)  
Callippe silverspot butterfly (*Speyeria callippe callippe*); FE  
Bay checkerspot butterfly (*Euphydras editha bayensis*); FT  
Vernal pool tadpole shrimp (*Lepidurus packardi*); FE  
Tiburon Indian paintbrush (*Castilleja affinis* ssp. *neglecta*); FE/ST  
Presidio clarkia (*Clarkia franciscana*); FE/SE  
Diablo helianthella (*Helianthella castanea*); FSC  
Big tarplant (*Blepharizonia plumose* var. *plumose*); FSC  
Round-leaved filaree (*California macrophylla*); FSC  
Fragrant fritillary (*Fritillaria liliacea*); FSC  
Most beautiful jewelflower (*Streptanthus albidus* ssp. *peramoenus*); FSC  
Bent-flowered fiddleneck (*Amsinckia lunaris*)  
Big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*)  
Mt. Diablo fairy lantern (*Calochortus pulchellus*)  
Mt. Hamilton coreopsis (*Coreopsis hamiltonii*)  
Hospital Canyon larkspur (*Delphinium californicum* ssp. *Inferius*)  
Hall's bush mallow (*Malacothamnus hallii*)  
Robust monardella (*Monardella villosa* ssp. *globosa*)

## **2.0 CONSERVATION MEASURES**

This Conservation Plan commits ODS to several additional avoidance, minimization and mitigation measures that will be implemented as part of the Revised SMP-17 project, to protect special-status species within the vicinity of Apperson Ridge, including: initiation of a federal Habitat Conservation Plan; changes (which are part of Revised SMP-17) which will modify the approved Apperson Quarry project; protocol-level biological surveys for special status species at and adjacent to the SMP-17 mining area; a number of specific avoidance and minimization measures for special-status species; and purchase and/or permanent protection of private land, at a preservation ratio of 3:1 for habitat impacts, and with a minimum parcel or parcels consisting of 600 acres protected. Notwithstanding anything to the contrary in this Conservation Plan, ODS shall not be required to provide copies of any surveys, reports or other data to the Conservation Groups until the surveys, reports or other data are submitted by ODS to the public agencies. ODS agrees to fund, implement and monitor all of the avoidance, mitigation, and conservation measures in accordance with the terms and conditions detailed in this section. All of the avoidance, mitigation, and conservation measures, and the funding agreements discussed in this Conservation Plan for the SMP-17 mining area and revised SMP-17 project will be transferred to any successor entity that may purchase, trade or acquire the SMP-17 or revised SMP-17 mining lease or permit from ODS.

### **2.1 Biological Goals**

The primary biological goals of this Conservation Plan are to avoid and minimize direct and indirect impacts to special-status species and their habitats within and adjacent to the Apperson Quarry, to the degree practicable, feasible, and consistent with good engineering practices. This plan seeks to avoid direct take of special status species through implementation of mitigation measure TAKE-1. Where avoidance is not practicable, feasible or consistent with good engineering practices, for example, in the direct footprint of the SMP-17 Project Area, the goal is to fully mitigate for any unavoidable impacts, using the agreed upon mitigation measures and ratios included in this Conservation Plan. This plan also seeks to provide additional conservation measures above and beyond what might be required through a CEQA review, permit conditions, or lease terms, in order to best conserve and enhance special-status species and their habitats in the vicinity of the SMP-17 and Revised SMP-17 projects. To the degree practicable, feasible and consistent with good engineering practices, specific biological objectives are to maintain viable populations of all special-status species in the Project Area, maintain wildlife movement corridors, improve habitat suitability for target species, and replace direct loss of habitat at a reasonable and robust mitigation ratio. Ancillary purposes of this Conservation Plan are to assist in compliance with the federal and state Endangered Species Acts, to provide the basis for take authorization pursuant to the ESA and CESA, to provide “no challenges” assurances by CBD and ACA, and to provide the basis for regulatory assurances for the project proponent.

### **2.2 Initiation of a Federal Habitat Conservation Plan**

ODS will work with the Alameda Creek Alliance to implement the following measures relating to a federal Habitat Conservation Plan (“HCP”) for the Apperson Quarry project:

**HCP-1:** If and when the Revised SMP-17 project meets final Approval and the SMP-30 lease is extended by the SFPUC until 2064, ODS will seek approval from the U.S. Fish and Wildlife Service (“USFWS”) (and NMFS, if needed) for a federal HCP and Incidental Take Permit (“ITP”) for the SMP-17 mining area and the Revised SMP-17 project. The HCP will be prepared in coordination with the USFWS under Section 10 of the Endangered Species Act (“ESA”) and will allow for legal “take” of individuals of species covered under the HCP. The HCP will delineate required avoidance and mitigation measures for each potentially impacted species of concern, and will assure compliance with the federal ESA. ODS will propose to include, at a minimum, all of the special-status species, and all of the avoidance, mitigation and conservation measures included in this Conservation Plan as part of the HCP or, if a Section 7 path is followed, will include all of the measures as part of its proposal for incidental take authority. ODS will seek an HCP that includes “no surprises” protection from take liability and regulatory assurances for ODS.

**HCP-2:** The HCP proposal to the USFWS will contain, at a minimum, the following elements:

- Identification of all responsible parties and financial assurances for all project mitigation and monitoring activities;
- A determination and quantification of impacts on species and habitats resulting from the project;
- Identification of mitigation and management objectives;
- Characterization of habitat types to be impacted, including an assessment of functions and values of each habitat type;
- Identification of compensatory lands, including an assessment of functions and values of each habitat type present on those lands;
- Identification of a mechanism for conservation and protection of compensatory lands in perpetuity, such as a conservation easement;
- Development of a range of potential restoration, enhancement, and management options aimed at maximizing the value of the compensatory lands, including incorporation of existing management plans and other terms and conditions of SMP-17 as appropriate (such options could include, for example, a range management plan, fencing of riparian areas and stock ponds in order to enhance riparian and wetland vegetation, creation of new stock ponds to provide additional habitat for listed species, active restoration of perennial grasslands, etc.);
- Identification of specific management tasks and an implementation schedule;
- Provisions for monitoring of impacts within the project footprint as well as monitoring of compensatory lands, including monitoring of any specific restoration and/or enhancement projects or programs that are implemented; and
- A monitoring implementation schedule, clearly defined and quantifiable performance standards and success criteria, methods for quantitative and qualitative monitoring of all aspects of the mitigation and management program, contingency measures and an adaptive management program to be based on the monitoring results in the event that

standards and criteria are not being met over time, and methods and scheduling for monitoring reporting.

**HCP-3:** If an HCP is approved by the USFWS and USFWS issues an incidental take permit acceptable in form to ODS, ODS will implement the provisions of the HCP before and during mining at the SMP-17 Project Area, in accordance with the timelines of the HCP, as well as any additional mitigations in this conservation plan which are not included in the HCP but are consistent with, and do not conflict with, the provisions of the HCP.

**HCP-4:** If, in preparation of an HCP for the SMP-17 Project Area, the USFWS requires higher mitigation ratios for potential impacts to any special-status species or habitats than specified in this Conservation Plan, ODS will be required to implement the higher mitigation ratios requested by the USFWS. If the USFWS requires lower mitigation ratios for potential impacts to any special-status species or habitats than specified in this Conservation Plan, ODS will be required to implement the higher mitigation ratios contained in this plan. If any of the terms of the take avoidance measures and best management practices outlined in Appendix C conflict with the terms of the incidental take permit with its accompanying HCP, the latter shall be controlling. For the purposes of this Section HCP-4, a conflict among documents shall arise if specific terms in the HCP, on the one hand, preclude or conflict with performance of specific terms in the MCA and/or the Conservation Agreements, on the other hand, or vice versa. No conflict shall exist if obligations in one document are omitted from the other unless there would be an actual conflict if both were implemented. Notwithstanding the foregoing, nothing in this provision shall require ODS to perform essentially duplicative mitigation ratios or surveys.

**HCP-5:** The HCP will be fully developed and compensatory lands will be acquired or conservation easements obtained and deeded to the EBRPD (as discussed in Section 2.4 below) prior to any mining or construction activity at the SMP-17 Project Area, so long as all required Approvals for the SMP-17 and Revised SMP-17 projects have been satisfactorily obtained. As feasible, specific management programs and restoration efforts will be initiated prior to project implementation.

**HCP-6:** Special-status species surveys for all species to be covered under the HCP will be conducted according to USFWS and CDFG protocols, as required by the agencies, before the HCP is completed. These surveys shall be shared with the Conservation Groups at the time they are submitted to the public agencies.

**HCP-7:** If requested by the ACA and CBD during the preparation of the HCP, ODS will fund peer-review of specific reports by a qualified consultant reasonably approved by all Parties, unless the Parties have previously agreed to the consultant used to prepare the HCP. Any such peer-review shall be shared with the Conservation Groups and the relevant state and federal regulatory agencies at the same time.

**HCP-8:** ODS will choose to proceed to obtain appropriate federal incidental take authorizations for individual species, at its sole option, by pursuing a Section 10 incidental take permit, a Section 7 incidental take statement resulting from a Section 7 consultation

process, and/or any other mechanism available in the federal ESA or other federal statutes at the time that such authorization is applied for.

**HCP-9:** If an HCP is not signed nor a Section 10 consultation completed, ODS, conditioned upon its implementation of SMP-17 and Revised SMP-17, will still be responsible for implementing the provisions of this Conservation Plan before and during SMP-17 mining, in accordance with this Conservation Plan. In the event ODS does not receive an approved HCP and/or ITP, this Conservation Plan will serve to mitigate for impacts to special-status species and habitat.

## **2.3 Measures to Avoid and Minimize Impacts**

### **2.3.1 Changes to the Project**

As part of the Revised SMP-17 project, ODS will make changes to the Apperson Quarry project as approved in 1984, adding the measures in this Conservation Plan designed to avoid and minimize impacts to special-status species, as much as feasible. ODS agrees to the following terms for Revised SMP-17, to effect changes to the SMP-17 project as approved by Alameda County in 1984:

#### *Delayed Commencement of Mining*

**CHANGE-1:** Commencement of mining at Apperson Quarry (SMP-17) will begin no earlier than 2030 and not before cessation of mining at SMP-30. Construction of improvements and facilities for SMP-17 and Revised SMP-17 may be done during the two (2) years prior to commencement of mining at SMP-17, but not before 2030.

#### *Relocation of Processing Plants and Equipment*

The siting of the asphalt and concrete batch plants at the SMP-30 site will eliminate direct impacts to potential habitat for sensitive wildlife species, and significantly reduce noise impacts on Apperson Ridge. The location of the asphalt and concrete batch plants and associated facilities at the SMP-30 site, and the need for less equipment storage, will also significantly reduce the need for grading and disturbance at the Apperson Ridge. The location of the processing plants and other infrastructure at the SMP-30 site until 2064 reduces the amount of excavation of dirt and embankment of dirt at Apperson Ridge. The operation of the processing plants at the SMP-30 site until 2064 will reduce noise, disturbance of wildlife, and the potential for impacts to special-status species at Apperson Ridge. With these provisions of Revised SMP-17 and Further Revised SMP-30, and the resulting changes to the SMP-17 project, the footprint of mining and other associated infrastructure at Apperson Ridge will be reduced by 25 acres.

**CHANGE-2:** Subject to Approval of Further Revised SMP-30 and Revised SMP-17, and consultation with the EBRPD and the SFPUC, the asphalt and concrete batch plants will not be located at the Apperson site. They will instead be located at the SMP-30 site, where they will operate year round on a demand basis until 2064. Subject to Approval of Further



Revised SMP-30 and Revised SMP-17, the proposed cement storage silo, concrete batch plant mixer, concrete weigh hopper, and scale houses will not be built at the SMP-17 site. Related facilities for production and retail sales of aggregate, asphalt and concrete also will be located at the SMP-30 site. Extracted rock will be crushed at the SMP-17 site in order to size the material for transport by conveyor system to the production facilities at the SMP-30 site. Processing of rock at the SMP-17 site will be limited to the use of 1 Grizzly and 1 Jaw Crusher (or similar equipment) to size mined material for transport to SMP-30 via conveyor system, and on-site conveyors. There will be a small number of surge piles that will feed the conveyor system. The proposed Cone Crusher and Gyro Disc Crusher will not be used at the SMP-17 site, pursuant to Revised SMP-17.

### *Conveyor Transport of Mined Materials*

Use of a conveyor system will significantly reduce traffic on the access road, from 1,160 trips per day to an estimated 50 to 100 trips per day between Calaveras Road and the Apperson Ridge. Most significantly, there will be no over-the-road trucks hauling extracted rock or delivering asphalt and cement products, thereby reducing noise and dust along the access road. SMP-17 allows excavation of an estimated 450,000 cubic yards of dirt and embankment of 460,000 cubic yards of dirt within a 50 foot right of way for improving the access road. However, pursuant to Revised SMP-17 and Further Revised SMP-30, much of this road improvement, such as proposed grading for slopes, will not be needed, reducing the grading footprint of the access road.

**CHANGE-3:** Subject to Approval of Further Revised SMP-30 and Revised SMP-17, excavated and sized material will be transported from the SMP-17 site via conveyor system to the SMP-30 site for further processing. ODS will develop a traffic management plan that minimizes vehicle trips on the access road, including a regular employee carpool from Calaveras Road to the SMP-17 site. Vehicle access to the site will be generally along the alignment of the existing access roads which are located in a private access easement which traverses approximately 2.8 miles of SFPUC watershed lands from Calaveras Road to the Apperson Ranch boundary and then 1.9 miles of the ranch to the quarry plant site. The access road will be improved to allow all-weather access to the SMP-17 site (which may include paving) and some realignment will be performed to smooth out some of the tighter curves and steeper grades. The conveyor system and all towers, supports and infrastructure will be removed and the disturbed habitat will be restored within two (2) years of the completion of mining at SMP-17.

### *Potential Reduction in Spring Operations to Reduce Wildlife Disturbance*

Noise from quarrying activities and truck traffic on the access road was anticipated in the 1984 EIR to be the major disturbance to tule elk and special-status birds. Noise impacts anticipated in the 1984 EIR originated from three sources: blasting, quarry plant operations, and projected traffic. The 1984 EIR anticipated decibel levels from blasting, the crusher, and other mining activities ranging from 47 decibels to up to 99 decibels at 300 feet, with estimated attenuation from distance and terrain producing a maximum of 42 decibels at the

top Welch Creek Road, Maguire Peaks, and northern portions of Sunol Wilderness, and a maximum of 32 decibels at Sunol Regional Park picnic area.

The projected decibel levels from blasting may be less than anticipated in the 1984 EIR because of improved blasting and noise reduction technology. Noise from the processing plant was a major impact, with the crusher anticipated to produce noise up to 78 decibels at a 300 foot distance. Subject to Approval of Revised SMP-17 and Further Revised SMP-30, most of the quarry processing plant operations will be moved off site, so they will no longer be an impact to wildlife in the vicinity of Apperson Ridge. Only one Grizzly and one Jaw Crusher (or similar equipment) will be used at Apperson Ridge to size mined material for transport to SMP-30 via conveyor belt, and on-site conveyors. Subject to Approval of Revised SMP-17 and Further Revised SMP-30, the Cone Crusher and Gyro Disc Crusher will no longer be used at the SMP-17 site.

The quarry trucks on the haul road were predicted to be audible from a distance of up to 2,000 feet. Pursuant to Revised SMP-17, truck traffic for hauling product in and out of quarry plants will be reduced significantly, so that traffic on the road will be a few pieces of heavy equipment and worker and maintenance vehicles. Subject to Approval of Revised SMP-17 and Further Revised SMP-30, projected traffic will be reduced from 1,160 trips per day to between 50 to 100 trips per day, and no heavy haul trucks will use the access road. The conveyor belt will produce some noise, anticipated to be in the range of 80 decibels or less at 300 feet.

Approval of Revised SMP-17 and Further Revised SMP-30 and their implementation by ODS will greatly mitigate potential noise impacts from Apperson Quarry. Subject to the ability to stockpile material mined from SMP-17 at the SMP-30 site, ODS will make every practicable and feasible effort to limit blasting and other noise producing operations at SMP-17 as much as possible during elk calving season and raptor nesting season, from February 15 through June 15.

**CHANGE-4:** If ODS receives an extension of the SMP-30 lease until 2064 and receives permission from the SFPUC to stockpile sufficient amounts of material mined at SMP-17 on the SMP-30 site, seasonal restrictions on quarrying activities producing excessive noise at Apperson Quarry may be implemented. To the extent it does not restrict full operation of the asphalt and ready-mix concrete plants at SMP-30, ODS may limit blasting, quarrying, or rock crushing operations at SMP-17 that produce a noise level above 80 decibels at the elk calving area, at known raptor nesting areas, or at riparian woodlands with suitable raptor nesting habitat, from February 15 through June 15. To the extent it does not restrict full operation of the asphalt and ready-mix concrete plants at SMP-30, ODS may choose not to operate the conveyor system in a manner that produces a noise level above 80 decibels at the elk calving area or at known raptor nesting areas from February 15 through June 15. To determine decibel levels, ODS shall have a qualified noise expert install and test noise receptors at two locations in the elk calving area, at a representative known raptor nesting location within one (1) mile of the active mining area on public or accessible private land, and at a minimum of one location within all riparian areas on public or accessible private land with suitable raptor nesting habitat located within one-half (½) mile of the active mining area. ODS will test

operation of all equipment, machinery and blasting that will be used during quarry operations to determine attenuated decibel levels at the receptor locations during the off season, specifically between July 1 to February 1.

**CHANGE-5:** ODS will employ feasible and practicable technology to reduce ambient noise from quarrying, blasting, crushing, vehicles, and operation of the conveyor system. At no time will any of the quarrying operations at SMP-17 produce noise above a decibel level of 99 decibels at 300 feet, the maximum decibel levels anticipated in the 1984 EIR from blasting and other mining activities.

#### *Changes to Permits and Conditions of Approval*

**CHANGE-6:** ODS will reach agreement with the EBRPD on potential relocation of the stationary quarry facilities, including the concrete and asphalt plants, to the SMP-30 site.

### **2.3.2 Biological Surveys**

As part of its effort to obtain Approval of Revised SMP-17 and Further Revised SMP-30, ODS agrees to fund and complete the following biological surveys:

**SURVEY-1:** Subject to and within one year of Approval of the Revised SMP-30 lease extension, ODS will hire a qualified consultant, reasonably approved by all Parties, to conduct protocol-level biological surveys, as required by state and federal regulatory agencies, for all potentially occurring special status species at the SMP-17 mining area, Revised SMP-17 (including all potential conveyor routes), and immediately adjacent areas. The surveys will follow USFWS and CDFG accepted protocols. The surveys will be conducted as and when necessary to obtain Approval of Revised SMP-17 and the proposed HCP. These surveys shall be shared with the Conservation Groups at the time it is submitted by ODS to the regulatory agencies. Surveys for particular species will not be necessary if the Parties agree that presence can be presumed.

**SURVEY-2:** Within one year of Approval of the Revised SMP-30 lease extension, ODS will also hire a qualified consultant, reasonably approved by all Parties, to conduct surveys of the San Antonio tule elk herd, as discussed in measure ELK-5 below. The surveys will be conducted as and when necessary to obtain Approval of Revised SMP-17 and the proposed HCP. These surveys shall be shared with the Conservation Groups at the time it is submitted by ODS to the regulatory agencies.

**SURVEY-3:** Prior to the initiation of the CEQA process for Revised SMP-17 and within a sufficient period so as to maintain the relevancy and utility of the surveys, ODS will hire a qualified consultant, reasonably approved by all Parties, to complete more detailed vegetation mapping of the SMP-17 and Revised SMP-17 Project Area in order to inform the project planning process. This vegetation mapping shall be shared with the Conservation Groups at the time it is submitted by ODS to the regulatory agencies.

**SURVEY-4:** Prior to the initiation of the CEQA process for Revised SMP-17 and within a sufficient period so as to maintain the relevancy and utility of the surveys, ODS will hire a qualified consultant, reasonably approved by all Parties, to prepare an updated wetlands delineation for the SMP-17 and Revised SMP-17 project sites. This updated wetland delineation shall be shared with the Conservation Groups at the time it is submitted by ODS to the regulatory agencies.

**SURVEY-5:** Prior to the initiation of the CEQA process and within a sufficient period so as to maintain the relevancy and utility of the surveys for Revised SMP-17, ODS will hire a qualified consultant, reasonably approved by all Parties, to survey the SMP-17 and Revised SMP-17 Project Area for any federally or state listed plant species or those plants on the CNPS Lists 1, 2, 3, or 4, as well as those currently listed as Unusual and Significant in Alameda County, in order to inform the project planning process. These surveys shall be shared with the Conservation Groups at the time it is submitted by ODS to the regulatory agencies.

**SURVEY-6:** ODS will provide a copy to the ACA and CBD of all reports, surveys and monitoring data that it is required to submit to state, federal and County regulatory agencies and the SFPUC regarding SMP-17 and Revised SMP-17 at the time that ODS submits the reports, surveys and monitoring data to the regulatory agencies.

### **2.3.3 Take Avoidance**

The USFWS and CDFG typically require a number of survey and avoidance measures to reduce the likelihood of take of special-status species before issuance of permits or a biological opinion. ODS will implement the following mitigation measures and best management practices to avoid potential take of special-status species:

**TAKE-1:** Subject to Approval of Further Revised SMP-30 and Revised SMP-17, ODS will fund, comply with and implement all of the pre-project avoidance measures for sensitive species detailed in Appendix C. These measures include: exclusion of special-status species from mining and equipment areas before mining activities; potential relocation of special-status species from areas to be disturbed; pre-activity biological surveys; siting of infrastructure to avoid sensitive habitats; salvage of plants to be disturbed; and observation of vehicle speed limits. Where avoidance is not practicable, feasible or consistent with good engineering practices, for example, in the direct footprint of the SMP-17 Project Area, the goal is to fully mitigate for any unavoidable impacts, using the agreed upon mitigation measures and ratios included in this Conservation Plan. In such event, the Conservation Groups will not advocate for a jeopardy opinion, denial of a permit or to halt the project.

### **2.3.4 Tule Elk Protection**

Tule elk, once near extinction, received official state protection in California in 1971, and through decades of capture and relocation have been restored to healthier numbers. Today there are over 3,600 tule elk in California in 22 herds. The San Antonio herd is one of two

remaining herds in the East Bay, with 9 elk having split off from a herd introduced at Grant Ranch County Park in Santa Clara County in 1978. The elk established themselves at San Antonio Reservoir by 1980, and their home range, including calving and rutting areas, is south of the reservoir, and north and northwest of the SMP-17 quarry site.

Cow/calf groups of the San Antonio tule elk herd are thought to primarily use the drainages immediately south of the San Antonio Reservoir for foraging and calving from January through May, and shift west to Maguire Springs and spillway areas from June through September (Harvey and Stanley 1987). Calving season is March through June and occurs primarily in the eastern section of the home range; rutting season is early August through October and occurs primarily in the western section of the home range (Harvey and Stanley 1987; WRA 2003c). There were 28 known elk in the San Antonio herd as of 1986 (Harvey and Stanley Associates 1987), 70 known elk as of 1995 (WRA 2003c), and an estimated 58 elk as of 2007.

Harvey and Stanley Associates (1987) concluded that the Apperson Quarry project as approved in 1984 was likely to displace the San Antonio tule elk herd, primarily due to the disturbance impacts of truck traffic along the proposed access road for SMP-17.

An updated mitigation for tule elk, “Apperson Ridge Quarry Tule Elk Mitigation Program Condition 45” (WRA 2003c) was published by the Alameda County Planning Department in May 2003 (see Appendix F). This measure addresses monitoring of the San Antonio elk herd and maintenance of dispersal routes for tule elk. The avoidance, mitigation and enhancement measures discussed in Chapter 2, including mitigation measures CHANGE-2-5, SURVEY-2, TAKE-1, HABITAT-1, 2, and 5, and ELK-1-8, address potential noise impacts on the San Antonio elk herd and will significantly reduce the impacts of the Apperson Quarry on tule elk. Mitigation measures ELK-7-8 will fully compensate for any unavoidable impacts to the elk herd.

The mitigations measures CHANGE-2-5 discussed above concerning the Further Revised SMP-30 and Revised SMP-17 projects, particularly relocation of processing plants and equipment, conveyor system transport of mined materials, and reduced noise and wildlife disturbance, will significantly reduce potential noise impacts on tule elk. To best avoid and reduce potential direct and indirect impacts to tule elk, ODS will implement the following additional measures:

**ELK-1:** ODS shall adhere to the Tule Elk Mitigation Program Condition 45 (WRA 2003a) approved by Alameda County in 2003.

**ELK-2:** Subject to Approval of Further Revised SMP-30 and Revised SMP-17, the access road will not be used by haul trucks to bring in materials for production of asphalt and concrete nor to remove mined material from SMP-17.

**ELK-3:** Subject to Approval of Further Revised SMP-30 and Revised SMP-17, vehicular traffic on the access road will be limited to no more than 100 vehicle trips per day. ODS will prepare a traffic management plan to reduce vehicle traffic, with a focus on limiting vehicle

traffic during elk rutting and calving seasons. ODS will prepare and implement a daily employee carpool to limit personal vehicle traffic on the access road.

**ELK-4:** Subject to Approval of Further Revised SMP-30 and Revised SMP-17, a conveyor system will be installed to transport material mined at SMP-17 to the SMP-30 site for processing. The conveyor system will be designed so that elk movement is facilitated. ODS will determine the conveyor route in consultation with the EBRPD, SFPUC, CDFG, ACA, CBD, and a tule elk expert agreed upon by all Parties, and will determine the route and siting of the conveyor system before Revised SMP-17 is approved. The conveyor system will utilize gravity and solar power as feasible. ODS will employ all reasonably available technology to reduce noise from the conveyor system.

**ELK-5:** Within one year of the Approval of Revised SMP-30 project, ODS will hire a qualified consultant with expertise regarding tule elk, reasonably approved by all Parties, to determine the habitat needs, population status and trends of the San Antonio elk herd. The consultant will also evaluate the potential direct and indirect impacts of SMP-17 mining activity and Revised SMP-17 quarry activities on the long-term survival of the tule elk herd, including the potential for activity and noise to disperse the herd. The evaluation will include, but not be limited to, the potential effects of all quarry related activities including mining, vehicle activity, and the conveyor system. The evaluation will suggest potential phase-in of mining activities to acclimate the elk herd to the noise of mining operations. The evaluation will also suggest cattle grazing management measures to benefit elk on the remainder of the 680 acre leasehold. This evaluation shall be shared with the Conservation Groups at the time it is submitted by ODS to the regulatory agencies. A report on the status and potential impacts of mining activity on the tule elk herd will be completed as part of the environmental review for the Revised SMP-17 project.

**ELK-6:** Beginning ten (10) years before initiation of mining activities at SMP-17, ODS will hire a consultant with expertise regarding tule elk, reasonably approved by all Parties, to conduct annual surveys of the Sunol tule elk herd to monitor the population status and trends of the herd. Elk count surveys will be conducted annually during the duration of mining activity at SMP-17. ODS will provide biannual status reports on the San Antonio tule elk herd to ACA, CBD, SFPUC and the CDFG, beginning within two years of Approval of the Revised SMP-30, until two years after removal of the conveyor system and SMARA reclamation of the SMP-17 site is completed by ODS. A report on the short-term and long-term population trends of the Sunol tule elk herd will be prepared every five (5) years. The annual elk surveys and the 5-year population trend reports shall be shared with the Conservation Groups at the time it is submitted by ODS to the regulatory agencies.

**ELK-7:** ODS will contribute \$250,000 to the Conservation Groups to use toward purchase of habitat to help establish a tule elk reserve in northern California, or to apply to the enhancement of existing tule elk habitat, at the sole discretion of the Conservation Groups.

**ELK-8:** Conditioned upon Approval of Revised SMP-17 and initiation of mining activities at SMP-17, ODS will commence an annual payment to a fund jointly approved by ODS and the Conservation Groups of \$250,000 for mitigation for potential noise and disturbance impacts

to the Sunol tule elk herd. This annual \$250,000 payment will begin two (2) years prior to commencement of mining at SMP-17, at the time when construction of the conveyor system and other preparations for mining at SMP-17 begin, and payments will continue annually for the duration of mining activities at SMP-17. These payments to the fund will be used by the Conservation Groups, in their sole discretion, for tule elk conservation in northern California, specifically to reintroduce a tule elk herd, enhance an existing elk herd, and/or purchase or protect habitat for tule elk. Beginning on the date the first annual payment is made (approximately 2028), this annual payment will be adjusted annually by the increase, if any, of the Consumer Price Index (All Urban Consumers) – or equivalent substitute index, if approved by the Conservation Groups. Beginning after 10 years of operation of SMP-17, the annual \$250,000 payment by ODS is eligible to be reduced if the monitoring program discussed in ELK-6 above shows no change or an increase trend in the overall population of the Sunol elk herd. After 10 years of operation of SMP-17, the annual payment can be reduced by 10% if monitoring over the previous 5 year period (years 5-10 of operation of SMP-17) shows no change or an increase trend in the elk population from the previous 10 years. Every five (5) years thereafter, the annual payment can be reduced a further 10% if monitoring over the previous 5 year period shows no change or an increase trend in the overall population of the Sunol elk herd, compared to the trend of all previous monitoring years.

Notwithstanding the foregoing, if ODS elects to never conduct construction activities and/or mining at the SMP-17 Site between February 15 and June 15, the annual payment shall be \$50,000 rather than \$250,000. If after conducting construction activities or mining at the SMP-17 Site between February 15 and June 15, ODS elects not to operate the Apperson Quarry (no blasting, crushing, or rock removal) between February 15 and June 15 (elk calving season and raptor nesting season) of any given year, ODS will not pay the full \$250,000 for elk mitigation, but instead will pay \$125,000 for that year. If ODS chooses not to operate between February 15 and June 15 in a successive year, ODS would pay only \$50,000 to the elk mitigation fund for that year and following years. Re-commencement of mining between February 15 and June 15 would increase the annual mitigation payment back up to \$250,000.

### **2.3.5 Focal Species Protection**

#### *Amphibians – California Red-Legged Frog and California Tiger Salamander*

The Alameda County Planning Department updated Condition of Approval No. 50, the “Apperson Ridge California Red-legged Frog Avoidance Program,” in 2003 ((WRA 2003a: see Appendix F). This updated County mitigation addresses measures to avoid direct or indirect take of individual frogs through avoidance of breeding areas, pre-construction surveys, establishment of buffer areas, control of sedimentation, and maintenance of water quality. To address suitable frog breeding sites and maintenance of migration corridors and uplands habitat, the avoidance, mitigation and enhancement measures discussed in Chapter 2, including mitigation measures CHANGE-2-3, SURVEY-1 and 4, TAKE-1, HABITAT-1-3 and 5, and AMPH-1-3 below, will significantly reduce the potential impacts of the Apperson

Quarry on California red-legged frogs and California tiger salamanders and will fully compensate for any unavoidable impacts.

The stock pond on the southeast corner of the SMP-17 mining footprint immediately adjacent to the mining area (Stock Pond 1, or “SP1”), is currently known to support breeding California red-legged frogs, and it is presumed that although the pond probably will not be removed or filled, there may be impacts to frogs from mining activities and loss of uplands and connective habitat. ODS will mitigate for the impacts to the suitability of this habitat at SP1.

**AMPH-1:** ODS will replace the acreage of this frog pond (SP1) by purchasing or protecting in perpetuity suitable and occupied red-legged frog aquatic breeding habitat at a 4:1 preservation ratio.

**AMPH-2:** Subject to the consent of its lessor, ODS will manage five stock ponds on the 680 acre lease property that are not within the quarry footprint and which do not currently support the California tiger salamander or California red-legged frog to enhance habitat for these species, throughout the duration of the SMP-17 lease activity. There are over ten stock ponds in the lease area that generally conform to suitable habitat, but most lack vegetated edges (such as cattails or willows) as a substrate for egg deposition and breeding. Five of these ponds will be fenced or partially fenced from cattle use. The selection of ponds for fencing and management will be made on the basis of those closest to occupied habitat which best meet the following specifications:

- For frog breeding, create or maintain pond surface area of 0.25 acres or greater with a center depth of 4 feet and pond side slopes of 1:3 slope (rise: run) to promote growth of emergent vegetation; and
- For salamander breeding, create or maintain un-vegetated pond surface area of 0.25 acres or greater as an aquatic feature(s) or depression that ponds to a depth of 0.2 feet or greater for at least 90 to 105 continuous days during the salamander breeding season.

Upon demonstration that the ponds are successfully used by California red-legged frogs or California tiger salamanders for breeding (defined as documentation of successful breeding of California red-legged frogs and/or California tiger salamanders in three (3) of any five (5) consecutive years, or successful breeding in two consecutive years immediately prior), ODS will receive a credit against its mitigation obligations for the acreage of any of these five ponds that support breeding red-legged frogs and/or California tiger salamanders, provided the lessor agrees to manage them in perpetuity to maintain red-legged frogs and salamanders, or donates or sells the land to the EBRPD for this purpose.

**AMPH-3:** Subject to the evaluation and approval of CDFG and USFWS, if the mining activity at SMP-17 is expected to directly take the California red-legged frogs or California tiger salamanders at SP1, ODS will have a qualified certified biologist remove the existing frogs and salamanders before construction and move them to either: any of the 5 managed stock ponds discussed in measure AMPH-2 above, if CDFG and USFWS determine they can support breeding amphibians; or to suitable aquatic habitat within the parcel(s) of land discussed in measure HABITAT-2 and 3 below. If CDFG and USFWS do not approve such



translocation of the species present in this pond, then ODS shall mitigate for their loss at the mitigation ratios set forth above and shall seek to obtain an incidental take permit based on such mitigations.

#### *Alameda Whipsnake*

The avoidance, mitigation and enhancement measures discussed in Chapter 2, including mitigation measures CHANGE-2-3, SURVEY-1, TAKE-1, HABITAT-1-3 and 5, will significantly reduce the potential impacts of the Apperson Quarry on whipsnakes and will fully compensate for any unavoidable impacts.

#### *Nesting Raptors*

The avoidance, mitigation and enhancement measures discussed in Chapter 2, including mitigation measures CHANGES-2-5, SURVEY-1, TAKE-1, and HABITAT-1-4, will significantly reduce the potential impacts of the Apperson Quarry on raptors and will fully compensate for any unavoidable impacts.

#### *San Joaquin Kit Fox*

The occurrence of the kit fox on Apperson Ridge is unlikely because of the slopes on the area, which exceed the optimal topography of flat to gently rolling grasslands for the species. There are exceptions, however, especially at the extremities of the kit fox range. Occupied kit fox habitat outside the mining footprint will be avoided, as discussed in the take avoidance measures outlined in Appendix C for the kit fox.

**KF-1:** If an occupied kit fox den is found within the mining footprint or any other area of direct disturbance at SMP-17; or within 100 feet of the mining footprint or any other area of direct disturbance at SMP-17, or within 100 feet of the conveyor system or the access road, ODS will consult with the USFWS and CDFG regarding appropriate habitat replacement mitigation for any kit fox den and habitat that is lost or disturbed by the SMP-17 or Revised SMP-17 projects. The Conservation Groups agree that any impacts related to kit foxes can be mitigated with appropriate habitat replacement mitigation and the Conservation Groups agree to advocate that position in all USFWS and CDFG meetings and in all communications with their members and with third parties. In no event will the Conservation Groups advocate for a jeopardy opinion, denial of a permit, or a halt to the project with USFWS, CDFG or any other public agencies as to any special status species.

#### *Berkeley Kangaroo Rat*

The Berkeley kangaroo rat has been presumed extinct since 1940, and the likelihood of it still occurring in the project vicinity is speculative. The Berkeley kangaroo rat is not a well known species, but the home ranges of other related kangaroo rat species are not large. If present, kangaroo rats would be expected to occur on ridge tops and chaparral/scrub areas at relatively low densities. Occupied kangaroo rat habitat outside the mining footprint will be

avoided, as discussed in the take avoidance measures outlined in Appendix C for the kangaroo rat.

**BKR-1:** If kangaroo rats of any species are found within the mining footprint or any other area of direct disturbance at SMP-17; or within 100 feet of the mining footprint or any other area of direct disturbance at SMP-17, or within 100 feet of the conveyor system or the access road, ODS will fund a DNA analysis to determine if the species is the Berkeley kangaroo rat (*Dipodomys heermanni berkeleyensis*) and to help develop a DNA profile for the species.

**BKR-2:** If occupied Berkeley kangaroo rat burrows are found within the mining footprint or any other area of direct disturbance at SMP-17; or within 100 feet of the mining footprint or any other area of direct disturbance at SMP-17, or within 100 feet of the conveyor system or the access road, ODS must consult with the USFWS and CDFG regarding appropriate habitat replacement mitigation for any kangaroo rat burrows and habitat that is lost or disturbed by the SMP-17 or Revised SMP-17 projects. The Conservation Groups agree that any impacts related to kangaroo rats can be mitigated with appropriate habitat replacement mitigation and the Conservation Groups agree to advocate that position in all USFWS and CDFG meetings and in all communications with their members and with third parties. In no event will the Conservation Groups advocate for a jeopardy opinion, denial of a permit, or a halt to the project with USFWS, CDFG or any other public agencies as to any special status species.

**BKR-3:** If Berkeley kangaroo rats are found on Apperson Ridge within the mining footprint, ODS will coordinate with the USFWS and, if approved, fund a captive breeding program for the species.

#### *Listed Butterflies*

Although there are no known extant populations of the callippe silverspot or bay checkerspot butterflies in the Project area, they are each associated with particular host plants. *Viola pedunculata* is the host plant for the callippe silverspot and is most likely to occur in the Project Area. The potential for occurrence of host plants for the bay checkerspot, *Plantago erecta*, *Castilleja densiflorus* and *C. exserta*, is not as high. Mitigation will be based on loss of any occupied host plant populations.

**INV-1:** If occupied callippe silverspot butterfly or Bay checkerspot butterfly habitat is found within the mining footprint or any other area of direct disturbance at SMP-17; or within 100 feet of the mining footprint or any other area of direct disturbance at SMP-17, or within 100 feet of the conveyor system or the access road, ODS must consult with the USFWS and CDFG regarding appropriate habitat replacement mitigation for any listed butterfly habitat that is lost or disturbed by the SMP-17 or Revised SMP-17 projects. The Conservation Groups agree that any impacts related to listed butterflies can be mitigated with appropriate habitat replacement mitigation and the Conservation Groups agree to advocate that position in all USFWS and CDFG meetings and in all communications with their members and with third parties. In no event will the Conservation Groups advocate for a jeopardy opinion, denial of a permit, or a halt to the project with USFWS, CDFG or any other public agencies as to any special status species.

### **2.3.6 Water Quality Protection**

Since pursuant to Revised SMP-17 the access road would no longer be used for transporting crushed rock or any concrete or asphalt materials or byproducts, the potential for harmful spills has been greatly reduced. Detention ponds, catch basins, and a road drainage system are required by Alameda County as part of the project to address the potential for runoff and sedimentation. ODS is required to submit a water quality maintenance plan for approval by Alameda County, in coordination with the SFPUC. Alameda County (1984) concluded that there is no potential for groundwater contamination nor impacts or changes to the water quality of San Antonio and Alameda Creeks. Water quality and the potential for turbidity and increased runoff will also be addressed by updated Water Discharge Requirements from the RWQCB.

### **2.4 Habitat Acquisition Measures to Mitigate Unavoidable Impacts**

This conservation plan commits ODS to further compensate for unavoidable potential impacts to special-status species and their habitats within the vicinity of Apperson Ridge from direct habitat loss. Mitigation will occur primarily through purchase and permanent protection of unprotected private land containing habitat attributes similar to Apperson Ridge (containing a mosaic of habitats as well as topographic diversity similar to that on the Project site).

Mitigation for all permanently lost habitat due to SMP-17 and Revised SMP-17 will occur at a minimum 3:1 preservation ratio, with purchase or dedication of conservation easements of at least 600 acres of private land. Mitigation for breeding habitat for several focal species will occur at a 4:1 preservation ratio. Mitigation of temporary habitat loss will occur at a 1:1 preservation ratio. The extent of temporary habitat loss is unknown at this time.

An estimated 110 acres of annual grasslands habitat will be permanently lost to the SMP-17 and Revised SMP-17 projects. Because the Apperson grasslands have the potential to support a suite of special-status species, mitigation is required at a 3:1 preservation ratio, or about 330 acres of annual grasslands. An estimated 1 acre of coastal scrub habitat will be permanently lost to the projects, requiring mitigation at a 3:1 preservation ratio, or about 3 acres of coastal scrub, unless it is deemed occupied habitat for the Alameda whipsnake, which will require a 4:1 preservation ratio. An estimated 3.75 acres of oak woodlands habitat will be permanently lost to the projects, requiring mitigation at a 3:1 preservation ratio, or about 11.25 acres of oak woodlands; an estimated 0.25 acres of riparian woodlands habitat will be permanently lost to the project, requiring mitigation at a 3:1 preservation ratio, or about 0.75 acres of riparian woodlands, unless the woodlands are deemed nesting habitat for raptors, which will require a 4:1 preservation ratio. Any wetlands permanently lost to the project will be mitigated at a 4:1 preservation ratio if they are deemed suitable habitat for the California red-legged frog or California tiger salamander.

For the purposes of this Habitat Acquisition section, “occupied” habitat is defined as habitat for which the focal species was known to be present within 5 years of the initiation of mining

activities at SMP-17, or for which all Parties agree the habitat is occupied by the focal species.

ODS will undertake the following habitat acquisition measures:

**HABITAT-1:** ODS will mitigate all permanent habitat loss due to the SMP-17 and Revised SMP-17 projects, including the footprint of mining, access road improvements, conveyor system, and other infrastructure through purchase or permanent protection of similar habitats on private land, at a 3:1 preservation ratio.

**HABITAT-2:** Subject to Approval of Further Revised SMP-30 and Revised SMP-17, to satisfy the conditions of mitigation HABITAT-1 and HABITAT 3-5, ODS will purchase a private parcel or parcels of land or conservation easements (with terms and conditions mutually agreeable to all Parties) of at least 600 acres, containing habitat attributes similar to Apperson Ridge, and will donate the land to the EBRPD. This land will be a parcel other than the 140-acre and 180-acre parcels specified in the 1984 agreement with the EBRPD. ODS, after consultation with ACA and CBD, will choose the land for purchase with input from the EBRPD. This compensatory land will be located as close as possible to the project site, will contain a mosaic of habitats as well as topographic diversity similar to that on the project site, and will contain drainages with riparian habitat as well as seasonal wetlands and stockponds. ODS will also provide the EBRPD with adequate endowment funding, at an amount mutually agreed upon by EBRPD and ODS, to provide for adequate monitoring and management of this land in perpetuity. This land may be used as mitigation for either Further Revised SMP-30 or Revised SMP-17, or both, and it may be used as mitigation for multiple species, if and when appropriate. However, this land shall not be used as mitigation for any other project, traded or exchanged in any “mitigation bank” or similar third-party mitigation credit mechanism.

**HABITAT-3:** ODS will mitigate for permanent loss of breeding habitat for several focal species (the California red-legged frog, California tiger salamander, Alameda whipsnake, and nesting raptors) at SMP-17 and Revised SMP-17, including the footprint of mining, access road improvements, and the conveyor system, at a 4:1 preservation ratio. Loss of occupied breeding ponds for the California red-legged frog and California tiger salamander will be mitigated with suitable breeding ponds at a 4:1 acreage preservation ratio. Loss of occupied sage-scrub habitat for the Alameda whipsnake will be mitigated with a 4:1 acreage preservation ratio of sage-scrub habitat. Loss of occupied riparian nesting habitat for raptors will be mitigated at a 4:1 acreage preservation ratio for any riparian trees lost within ¼ mile of an occupied nest and a minimum of 4 acres of riparian habitat for each occupied nest tree lost. If the 600 acre parcel does not contain the full 4:1 preservation ratio of suitable breeding habitat for focal species to like habitat lost to the project, ODS will make up the difference with either: purchase of additional private lands with the required habitat attributes to meet the 4:1 preservation ratio; purchase of mitigation credits for the specific habitat types in an approved mitigation bank, at a 5:1 preservation ratio; or enhancement of suitable occupied habitat on protected public lands, at a 6:1 preservation ratio. The Conservation Groups agree that any impacts related to the several focal species can be mitigated with appropriate habitat replacement mitigation and the Conservation Groups agree to advocate that position in all

USFWS and CDFG meetings and in all communications with their members and with third parties. In no event will the Conservation Groups advocate for a jeopardy opinion, denial of a permit, or a halt to the project with USFWS, CDFG or any other public agencies as to any focal species.

**HABITAT-4:** In the event of any permanent loss of occupied habitat for three rare endemic species (Bay checkerspot butterfly, callippe silverspot butterfly, and Berkeley kangaroo rat), ODS shall consult with the USFWS and CDFG regarding appropriate habitat replacement mitigation for any habitat for these three rare endemic species that is lost or disturbed by the SMP-17 or Revised SMP-17 projects. ODS shall mitigate for permanent loss of occupied habitat for populations of any special status plant species endemic to the Alameda Creek watershed at a 3:1 preservation ratio, using the maximum observed acreage of occupied plant habitat within 5 years of the initiation of mining activities at SMP-17. The Conservation Groups agree that any impacts related to the three rare endemic species can be mitigated with appropriate habitat replacement mitigation and the Conservation Groups agree to advocate that position in all USFWS and CDFG meetings and in all communications with their members and with third parties. In no event will the Conservation Groups advocate for a jeopardy opinion, denial of a permit, or a halt to the project with USFWS, CDFG or any other public agencies as to any rare endemic species.

**HABITAT-5:** ODS shall mitigate for any temporary habitat loss due to the footprint of infrastructure and construction of the conveyor system through purchase and permanent protection of similar habitats on private land, at a 1:1 preservation ratio; or with enhancement of similar habitats on protected public land, at a 2:1 preservation ratio.

## **2.5 Additional Conservation Measures**

### **2.5.1 Support for Conservation Efforts**

Assuming ODS receives approval of all proposed leases and permits for SMP-17 and SMP-30, over the lifetime of the SMP-30, Revised SMP-30, Further Revised SMP 30, SMP-17, and Revised SMP-17 projects, ODS will contribute funding to the Conservation Groups toward conservation efforts, including funding for conservation efforts to protect and restore special-status species and their habitats in the Alameda Creek watershed and the greater Bay Area, development of a Bay Area endangered species protection plan, publication of a report outlining essential conservation programs for Bay Area endangered species, and providing CBD and ACA with funding to enable their engaged participation in the HCP and to interact with permitting processes.

### **2.5.2 Greenhouse Gas Emissions**

The parties have an interest in reducing the greenhouse gas emissions of the Apperson Quarry project, to lessen the project's potential contribution to global warming.

Alameda County (1984) estimated that annual emissions from the Apperson Quarry (including the asphalt and concrete plants and mobile sources) would be 14.3 tons of sulfur

oxides, 49.2 tons of nitrogen oxides, 34.2 tons of carbon monoxide, and 11.8 tons of hydrocarbons. These estimates will need to be updated considering changes to the project and new technology, and to estimate all greenhouse gas emissions.

The siting of the processing plants at SMP-30, in near proximity to the SMP-17 mining site, and the use of a low-energy conveyor system to transport mined material to the processing plants will reduce greenhouse gas emissions from transport of materials. The SMP-17 project will be getting its water locally, which will reduce water transport and use, a significant contributor of greenhouse gases through power use.

In light of uncertainty about the laws that may be in place to control greenhouse gas emissions in 2031, the provisions below are in addition to any state or federal laws or regulations regarding greenhouse gas emissions in place at the time of implementation, but may be used to satisfy federal, state or local regulatory requirements at the discretion of federal, state and local regulators.

#### *Definitions that Apply to This Section*

“Practicable” is determined through consideration of available technology and the ability of that technology to reasonably meet the project demands at a competitive cost and in the time needed. It also takes into account any conflict that may arise with other legal standards.

“Feasible” means the object is capable of being successfully accomplished within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors.

“Best Available Technology” is defined as the most effective, legally and economically-achievable, and state-of-the-art technology currently in use for controlling greenhouse gas emissions, as determined by the United States Environmental Protection Agency, the Bay Area Air Quality Management District, or the California Air Resources Board under the applicable regulatory framework. If none of these agencies have developed appropriate technology-based guidelines for the specific technology, ODS will use best efforts to identify the most effective, legally and economically-achievable, and state-of-the-art technology currently in use for controlling greenhouse gas emissions.

Subject to approval of Revised SMP-17, ODS will implement the following measures to reduce greenhouse gas emissions:

**GG-1:** ODS will work with the Conservation Groups and a mutually approved greenhouse gas emission verifier to calculate the total direct carbon and greenhouse gas emissions over the lifetime of the SMP-17 project (including all mining activities at SMP-17, the conveyor system, and processing of mined material at the SMP-30 site). For the purpose of offsets, greenhouse gas emissions from the SMP-17 Project will be calculated and expressed in terms of carbon dioxide (CO<sub>2</sub>) equivalents, with gases other than CO<sub>2</sub> translated into CO<sub>2</sub> equivalents using global warming potentials, according to protocols and guidelines in use by the U.S. Environmental Protection Agency

<http://www.epa.gov/OMS/climate/420f05002.htm>) or its successor at the time of calculation. Direct emissions are the emissions from sources at the SMP-17 Project site (including all mining activities at SMP-17, the conveyor system, and processing of mined material at the SMP-30 Site) owned or controlled by ODS, and do not include indirect or offsite sources, such as the transportation of material from SMP-30 Site, purchased electricity generated offsite, or end-user uses of material sold at the SMP-30 Site.

ODS commits to implementing all practicable and feasible measures to reduce greenhouse gas emissions emitted at the project site. ODS will commit to offset 100 percent of the remaining direct greenhouse gas emissions of the SMP-17 project (including all mining activities at SMP-17, the conveyor system, and processing of mined material at the SMP-30 site). Offsets will be purchased from a fund or project selected by ODS and approved or certified by the California Climate Action Registry or its successor (or a mutually approved equivalent offset fund registry), and then approved by the Conservation Groups (such approval shall not be unreasonably withheld). The first annual calculation of greenhouse gas emissions will begin in 2031. Purchase of credits in an offset fund or other offset measure approved by the Conservation Groups will begin at the time mining commences under Revised SMP-17 and occur annually thereafter until mining is completed at SMP-17.. Credits will be purchased on an annual basis to offset the remaining emissions from the previous year. In no case shall ODS be required to, in order to satisfy this subsection (GG-1), make any annual payment for greenhouse gas offsets greater than \$125,000.00 (adjusted annually commencing upon Approval of Revised SMP-30 by the increase, if any, of the Consumer Price Index (All Urban Consumers) or equivalent substitute index, if approved by the Conservation Groups). Nor will ODS be required to offset more than 100% of emissions when offsets and reductions required by regulatory mandates are included.

**GG-2:** ODS commits to producing concrete from the material mined at Apperson at the processing plant at SMP-30 with the lowest feasible greenhouse gas emissions and the lowest feasible contribution to global warming. To the degree it is practicable and feasible, ODS will obtain cement from sources that meet or exceed the strictest greenhouse gas emissions regulatory standards in place in the United States in order to produce cement with the lowest possible greenhouse gas production. If it results in lower greenhouse gas emissions, and to the degree it is practicable and feasible, ODS will produce concrete mixes with the highest composition of supplementary materials and lowest cement composition under the best available technologies, and as appropriate for particular construction uses.

**GG-3:** ODS commits to minimizing greenhouse gas emissions throughout its production process - including materials, transportation, and batch production - through the use of the best available technologies. To the degree it is practicable and feasible and will achieve lower greenhouse gas emissions, ODS will use low emission power sources, including electricity and/or alternative low-carbon fuels, instead of diesel engines for all mining, transport and processing activities at SMP-17 and SMP-30. To the degree it is practicable and feasible, and will result in lower greenhouse gas emissions, ODS will use renewable sources of power to run the conveyor system and any other equipment for transport and processing of mined materials from SMP-17. ODS will use all feasible water conservation and recycling measures during SMP-17 and SMP-30 mining operations. ODS will employ all

practicable and feasible technological advances to reduce greenhouse gas emissions, including use of solar or diesel powered equipment. No equipment or technology installed will be required to be replaced to meet this standard until a reasonable return on the investment (or a reasonable working life) has been achieved for that piece of equipment.

### 2.5.3 Best Management Practices

ODS commits to implementing the following best management practices:

**BMP-1:** To prevent the spread of invasive plant species and limit the spread of plant diseases, such as sudden oak death syndrome, ODS will develop and implement a protocol for cleaning all equipment entering and leaving the SMP-17 and Revised SMP-17 sites to remove all dirt and potential sources of seeds and pathogens between operating locations, as practicable and feasible.

**BMP-2:** ODS will not use any poisons, pesticides, or engage in lethal control of ground squirrels or other rodents on the 680-acres lease property.

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## **4.0 APPENDICES**

### **APPENDIX A: ENVIRONMENTAL SETTING**

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### **APPENDIX G: VEGETATION MAP**

## APPENDIX A

### ENVIRONMENTAL SETTING

#### **Climate**

The Apperson Ridge area is intermediate between the moderate, marine Mediterranean conditions of the Bay Area and the more marked seasonality of the interior Central Valley. Because the area does not experience regular fog in the summer, summers are substantially hotter and drier than in areas nearer San Francisco Bay. Temperatures vary widely based on elevation and topography, but can range from more than 100°F (38+°C) in the summer to below freezing in the winter. Precipitation in the watershed occurs seasonally, with the bulk of rain falling between October and April. Although the annual total precipitation in the watershed varies widely from year to year, average annual precipitation ranges from approximately 10 to 20 inches, depending on elevation and aspect. The Conservation Plan area is dominated by xeric species that have adapted to relatively low rainfall and prolonged periods of drought.

#### **Topography and Geology**

Apperson Ridge is located in the Sunol region of southeastern Alameda County, California. It is part of a series of northwest to southeast trending Coastal Range ridges associated with the Calaveras Fault and lies to the east of the alluvial valley of Alameda Creek. Topography consists primarily of broad ridges with steep slopes dissected by small ephemeral drainages.

#### **Hydrology of Streams, Rivers, and Drainages**

Like other watersheds on the central and southern California coast, the Alameda Creek watershed is characterized by marked seasonal variation in precipitation and is subject to periodic droughts.

#### *Jurisdictional Waters and Wetlands*

A wetland delineation encompassing the basic project footprint was conducted in 2004 by Wetland Resource Associates (WRA 2004) and verified by the U. S. Army Corps of Engineers in 2005. The wetlands habitat types have been preliminarily characterized below using the information from this delineation. ODS will hire a consultant, approved by all parties, to prepare an updated wetlands delineation prior to any federal or state permits for SMP-17 activities and before any mining activities commence at SMP-17.

#### *Freshwater Seep / Freshwater Emergent Wetland Seeps*

Seeps within the wetland delineation study area are primarily fed by groundwater and can be wet year-round or seasonally depending on their elevation relative to the water table, local topography, and annual precipitation cycles.

### *Seasonal Wetlands and Wetland Swales*

The hydrology of seasonal wetlands and wetland swales derives from precipitation only.

### *Seasonal Marsh and Stock Pond Wetlands*

Freshwater emergent wetlands occur in several stock ponds and seep areas with perennial to near perennial water sources.

### *Streams*

Most of the stream drainages within the Project Area are intermittent or ephemeral and only provide aquatic habitat seasonally or for a limited time during and shortly after rainfall events.

## **Vegetation and Habitat Types**

Vegetation in the vicinity of Apperson Ridge consists of a mosaic of annual grasslands and woodlands dominated by a variety of oak species or comprised of mixed hardwoods, with small areas of coastal scrub occurring on steeper slopes, and riparian vegetation types along larger streams.

The consulting firm Environmental Science Associates (“ESA Assoc.”) used existing GIS data mapped as part of the CalVeg program to create a vegetation map of the Apperson Quarry Project Area (see Appendix G). ESA Assoc. ground-truthed the vegetation polygons during a reconnaissance-level survey of the site in 2007 in order to determine their accuracy. ESA Assoc. found the CalVeg data layer, which was created primarily through spectral analysis and aerial photo interpretation, to be fairly accurate, with most polygons appearing to be classified correctly. However, the minimum mapping unit of 2.5 acres did not capture some smaller areas of vegetation and a few polygons were classified incorrectly. ESA Assoc. corrected some of these problems, but due to time constraints were not able to completely revise the vegetation map. ODS will hire ESA Assoc. or a consultant agreed upon by all Parties to complete more detailed vegetation mapping of the Project Area prior to the CEQA process for Revised SMP-17, in order to inform the project planning process. While all of the vegetation types below were observed in the field by ESA Assoc. consultants, they were not able to map them all. As described below, there are nine distinct terrestrial vegetation types corresponding to eight wildlife habitat types that occur within the project footprint. Wetland and aquatic habitats are also discussed below but have not yet been mapped by ESA Assoc. See the project wetland delineation (WRA 2004) in Appendix E for wetland locations.

### *Annual Grass-Forb Alliance*

Annual grasslands on the project site are best developed on broad ridges and other gently sloping topography but also occur as understory in the various woodland types that occur on steeper slopes and in drainages. The long grazing history of the Diamond A Ranch, as well as on adjacent SFPUC lands, has resulted in a nearly complete conversion of the original

diverse perennial or mixed native grasslands to the non-native annual type. In addition, much of the Project Area has been overgrazed, resulting in a further overall reduction of plant diversity. Dominant non-native annual grasses include wild oats (*Avena* spp.), Italian ryegrass (*Lolium multiflorum*), ripgut brome (*Bromus diandrus*), and soft chess (*Bromus hordeaceus*). Non-native forbs noted include filaree (*Erodium cicutarium* and *E. botrys*), dove's foot crane's bill (*Geranium molle*), and yellow starthistle (*Centaurea solstitialis*). When not overgrazed, on the steep western slopes of Apperson Ridge for example, these grasslands support a higher number of native forbs. Several different native bulbs, soap plant (*Chlorogalum pomeridianum*) for example, occur quite frequently here, as well as checkerbloom (*Sidalcea* spp.), clarkia (*Clarkia* spp.), and yarrow (*Achillea millefolium*). As mapped within the Project Area this alliance also includes relatively small areas of perennial bunchgrasses (unidentifiable at the time of the ESA Assoc. site survey) located on areas with well drained, thin soils, such as the west facing slopes of Apperson Ridge and several roadcuts.

#### *Coastal Scrub: Coyote Brush Alliance/California Sagebrush Alliance*

Two types of coastal scrub occur within the project footprint: coyote brush (*Baccharis pilularis*) dominates one type and occurs primarily on east and north facing slopes, and California sagebrush (*Artemisia californica*) dominates the other type and occurs primarily on drier, hotter west and south facing slopes. Some stands mapped as coyote brush alliance are heavily impacted by cattle and are nearly monocultural, with coyote brush dominant and scattered poison oak (*Toxicodendron diversilobum*), bush monkeyflower (*Mimulus aurantiacus*), and blue elderberry (*Sambucus mexicana*). Other stands, such as those on the steep eastern flanks of Apperson Ridge are more diverse, likely due to their relative inaccessibility to cattle, with shrub associates including California sagebrush, gooseberry (*Ribes* spp.), California coffeeberry (*Rhamnus californica*) and holly-leaf redberry (*Rhamnus ilicifolia*). Stands mapped as California sagebrush alliance occur on the steep slopes overlooking Calaveras Road and, again, often appear heavily impacted by cattle and overwhelmingly dominated by a single shrub species - California sagebrush - with bush monkeyflower and shrub lupine (*Lupinus* spp.) also occurring sporadically. This alliance also occurs as understory to open blue oak woodlands on steep, dry slopes in the area.

#### *Oak Woodlands: Coast Live Oak Alliance/Blue Oak Alliance/Interior Mixed Hardwood Alliance*

There are three woodland types mapped within the project footprint that are dominated by oaks. The coast live oak (*Quercus agrifolia*) alliance is relatively sparsely distributed throughout the project site and is confined to the most mesic areas occupied by oak woodlands, such as the unnamed stream valley draining north to San Antonio Reservoir and several drainages with seeps along the flanks of Apperson Ridge, where sycamore (*Platanus racemosa*) also occurs. The blue oak (*Quercus douglasii*) alliance is more widely distributed, occurring on drier soils on south and west facing slopes, and on ridges as well as stream canyons and drainages. While these stands are dominated by blue oak, interior live oak (*Q. wislizenii*), valley oak (*Q. lobata*), and coast live oak may also occur. Oaks as a genus have a tendency to hybridize, blue oak hybridizes readily with valley oak for example, and it is

likely that such hybrids also occur in the Project Area. Finally, the interior mixed hardwood alliance occurs in the Project Area, primarily on north and east facing slopes. This is the most widely distributed of the oak dominated woodland types within the project footprint. These stands are not dominated by a single species, rather several oak species are co-dominant - including blue oak and coast live oak - and other tree species, notably California buckeye (*Aesculus californica*) and California bay occur more than occasionally. Due to grazing pressure, the oak woodland understory is often sparse, consists of non-native annual grassland, and is lacking entirely in many of the shrub associates that help to make more pristine oak woodlands so valuable for wildlife. Often, areas within the tree driplines, which tend to be heavily used by cattle, are completely dominated by one of several forbs rather than grasses, including miner's lettuce (*Claytonia perfoliata*) and Italian thistle (*Carduus pycnocephalus*). In addition these woodlands are primarily even-aged and generally lacking in seedlings, saplings, or smaller trees, indicating that they have not been regenerating for quite some time, again likely due primarily to grazing pressure.

#### *California Bay Alliance*

California bay (*Umbellularia californica*) alliance occurs along the south fork of Apperson Creek and along the road and a proposed conveyor system alignment at the northeast end of Apperson Ridge. This vegetation type on the project site consists of relatively pure stands of California bay, with virtually no understory.

#### *Riparian Woodlands: California Sycamore Alliance/Riparian Mixed Hardwoods Alliance*

San Antonio Creek below the San Antonio Reservoir dam supports California sycamore alliance vegetation from Calaveras Road to the point where the road paralleling the creek diverges to the south heading toward Apperson Ridge. The creek here rarely flows, so the riparian vegetation is fed primarily by seepage. As with most sycamore alluvial woodland remaining in the region, the channel-forming processes needed for stand regeneration are no longer present, and all of the trees are large and mature with no evident recruitment. Associate overstory species include arroyo willow (*Salix lasiolepis*) and valley oak. The understory is dominated by non-native grasses and ruderal species, with few shrubs present. The south fork of Apperson Creek supports a riparian mixed hardwoods alliance, where no single species appears dominant and, in most cases at least three genera are present in the canopy layer. Along the south fork oak, sycamore, buckeye, bay, and willow all make more than minor contributions to the riparian canopy. Riparian understory is limited to the deeply incised, steep banks of the creek, which are relatively inaccessible to cattle and includes California blackberry (*Rubus ursinus*), stinging nettle (*Urtica dioica*), California coffeeberry, and the non-native invasive poison hemlock (*Conium maculatum*).

#### *Freshwater Seeps*

Freshwater seeps support a range of wetland plant species, including soft rush (*Juncus effusus*), prickly ox-tongue (*Picris echioides*), and spreading bentgrass (*Agrostis stolonifera*).



### *Seasonal wetlands*

Seasonal wetlands on the site support only mildly hydrophytic plants. Typical species found by WRA (2004) included Italian ryegrass, Mediterranean barley (*Hordeum marinum*), and curly dock (*Rumex crispus*).

### *Seasonal Marsh and Stock Pond Wetlands*

Vegetation in these wetlands includes cattail (*Typha latifolia*), broad-leaf water plantain (*Alisma plantago-aquatica*), swamp timothy (*Crypsis schoenoides*), and field mint (*Mentha arvensis*).

## **Wildlife**

### *Grasslands*

Grasslands in the Project Area may provide habitat for a variety of common wildlife, including reptiles and amphibians, such as western fence lizard (*Sceloporus occidentalis*), northern alligator lizard (*Elgaria coerulea*), gopher snake (*Pituophis melanoleucus*), and California slender salamander (*Batrachoseps attenuatus*), as well as birds, including mourning dove (*Zenaidura macroura*) and meadowlark (*Sturnella neglecta*). Mammals such as Botta's pocket gopher (*Thomomys bottae*), California ground squirrel (*Spermophilus beecheyi*), and striped skunk (*Mephitis mephitis*) may dwell in grassland burrows and browse and forage on grassland plants. Small rodents attract and feed a variety of raptors including red-tailed hawk (*Buteo jamaicensis*) and golden eagle (*Aquila chrysaetos*). Project Area grasslands also provide forage for the San Antonio tule elk (*Cervus elaphus nannodes*) herd. Grasslands with native Johnny-jump-up (*Viola pedunculata*) and California buckeye (*Aesculus californica*) have the potential to support the Callippe silverspot butterfly (*Speyeria callippe callippe*).

### *Coastal Scrub*

Coastal scrub provides nesting and foraging habitat for various birds, including spotted towhee (*Pipilo maculatus*), California towhee (*Pipilo crissalis*), common bushtit (*Psaltriparus minimus*), western scrub jay (*Aphelocoma californica*), and California quail (*Callipepla californica*). Raptors, including Cooper's hawk (*Accipiter cooperii*) and sharp-shinned hawk (*Accipiter striatus*), may forage over such areas and prey on some of these small birds as well as on small mammals and reptiles such as California ground squirrel, brush rabbit (*Sylvilagus bachmani*), and western fence lizard.

### *Oak Woodlands*

In general, oak woodland communities can support an abundant assortment of common reptiles, amphibians, and small mammals such as western skink (*Eumeces skiltonianus*), Pacific chorus frog (*Pseudacris regilla*), northern alligator lizard, gopher snake, arboreal salamander (*Aneides lugubris*), and deer mouse (*Peromyscus maniculatus*). Resident and

migratory bird species found in oak woodlands include spotted towhee, brown creeper (*Certhia americana*), oak titmouse (*Parus inornatus*), Hutton's vireo (*Vireo huttoni*), western scrub jay, northern flicker, dark-eyed junco (*Junco hyemalis*), downy woodpecker (*Picoides pubescens*), and orange-crowned warbler (*Vermivora celata*). Raptors that breed and nest in local woodland communities include red-tailed hawk, sharp-shinned hawk, Cooper's hawk, and others. Oak woodland can also provide breeding and roosting habitat for bats, including fringed myotis (*Myotis thysanodes*) and long-eared myotis (*Myotis evotis*). Larger mammals that use oak woodlands include California black-tailed deer (*Odocoileus hemionus columbianus*) and gray fox (*Urocyon cinereoargenteus*).

### *California Bay Woodlands*

California bay woodlands provide habitat for slender salamanders and varied thrush (*Ixoreus naevius*), and potential nesting habitat for American robin (*Turdus migratorius*), western scrub jay, and Steller's jay (*Cyanocitta stelleri*). Other species that may use this woodland type include California black-tailed deer, raccoon (*Procyon lotor*), and opossum (*Didelphis virginiana*).

### *Riparian Woodlands*

The large trees along San Antonio Creek provide opportunities for cavity nesters, such as woodpeckers, American kestrel (*Falco sparverius*), and bats, as well as sufficient structural support for nesting raptors. Riparian woodlands provide important corridors for wildlife movement as many animals are attracted when water is present. Wildlife species that may use both riparian woodland types within the project footprint are similar to those using woodlands and include tule elk, black-tailed deer, raccoon, western red bat (*Lasiurus blossevillii*), gray fox, striped skunk, and deer mouse. Birds that may be found in this cover type include Wilson's warbler (*Wilsonia pusilla*), yellow warbler (*Dendroica petechia*), red-shouldered hawk (*Buteo lineatus*), and black-headed grosbeak (*Pheucticus melanocephalus*).

### *Streams*

Although some of the stream drainages have a direct connection to larger waters capable of supporting fish and amphibians, aquatic habitat present in them is generally limited in value due to their relatively small size, a lack of instream habitat diversity, and the absence of perennial streamflow. These drainages may provide some instream habitat for aquatic invertebrates and provide a water source for terrestrial wildlife when they are running. However, it is highly improbable that fish are present in these drainages and the general lack of instream vegetation makes it highly unlikely that amphibians, such as the California red-legged frog (*Rana aurora draytonii*), foothill yellow-legged frog (*Rana boylei*), or California tiger salamander (*Ambystoma californiense*) would use these streams for breeding purposes. The south fork of Apperson Creek is the only perennial stream within the project footprint and may have the potential to provide suitable habitat for fish or special-status amphibians. Stock ponds and seasonal wetlands within the Project Area provide aquatic habitat and several of these are documented as supporting both California red-legged frog and California

tiger salamander. Unless all Parties agree presence is assumed, protocol-level surveys for both species will be conducted in all suitable aquatic habitats.

### *Seasonal Wetlands*

Seasonal wetlands may support aquatic invertebrates.

### *Seasonal Marsh and Stock Pond Wetlands*

Seasonal wetlands may provide habitat for aquatic invertebrates, including listed and non-listed fairy shrimp. Depending on the hydroperiod length, seasonal wetlands on the Diamond A Ranch may provide breeding habitat for amphibians, including Pacific chorus frog and California tiger salamander. Seep habitat and stock ponds with perennial water can provide an important source of water and cover, where emergent wetlands are present, for animals during the dry season, including amphibians such as slender salamander and Pacific chorus frog, black-tailed deer, gray fox, mountain lion (*Felis concolor*), and a wide variety of birds. California red-legged frog and California tiger salamander may use emergent wetlands for breeding.

## APPENDIX B

### SPECIAL-STATUS SPECIES

The following special-status species have the potential to occur within the Project Area or in the vicinity of Apperson Ridge. For each species, the state and federal status is given, along with habitat preference.

California tiger salamander (*Ambystoma californiense*)

FT/CSC

The California tiger salamander uses both aquatic and upland habitat types. The availability of suitable aquatic breeding habitat is likely a factor limiting occupancy in otherwise suitable upland habitat. The salamander breeds in vernal pools or seasonal freshwater ponds with little or no emergent vegetation, and utilizes mammal burrows in adjacent upland habitat for aestivation during the dry season.

*Potential for Occurrence:* There are several known tiger salamander locations in stock ponds in and surrounding the Project Area (CDFG 2007) - in particular the quarry access road crosses one pond where this species is present.

California red-legged frog (*Rana aurora draytonii*)

FT/CSC

California red-legged frogs have been known to occupy a variety of habitats, but they are restricted to areas in the vicinity of aquatic habitats suitable for breeding, in grassland and woodland communities. Suitable aquatic habitats support emergent and riparian vegetation and may lack substantial populations of competing and predatory fish and bullfrogs. The red-legged frog breeds in stock ponds, pools, and slow-moving streams with emergent vegetation for escape cover and egg attachment. Where water is seasonal it often utilizes mammal burrows in upland habitat for aestivation.

*Potential for Occurrence:* There are several known red-legged frog breeding locations in stock ponds in the Project Area (CDFG 2007).

Rainbow trout (*Oncorhynchus mykiss irideus*)

--/---

Rainbow trout inhabit accessible Bay Area and coastal rivers and streams. Rainbow trout require coldwater streams with sufficient dissolved oxygen and aquatic invertebrates as a food base. Trout need gravel substrate for spawning and instream habitat complexity for protection from predators.

*Potential for Occurrence:* Populations of landlocked steelhead trout are present in San Antonio and Calaveras Reservoir and its major tributaries, including Indian Creek, San Antonio Creek, and Arroyo Hondo (SFPUC Water Quality Bureau 2003).

Golden eagle (*Aquila chrysaetos*)

BPA/CSC, FPS

Golden eagles inhabit open hills with grassland, open scrub, adequate prey base, and large trees or cliffs for nesting.

*Potential for Occurrence:* Golden eagles are numerous in the Project Area and the Diamond A Ranch. Golden eagles are known to nest at San Antonio Reservoir (CDFG 2007) and within Project Area. They have also been observed foraging in the Project Area. There are several CNDDDB records for this species within 5 miles of the Project Area.

California horned lark (*Eremophila alpestris actia*)

--/CSC

The horned lark inhabits short grass prairie, fallow grain fields, and open areas with short vegetation. It nests in sparse grasslands and barren areas.

*Potential for Occurrence:* Suitable habitat is present for horned larks in the Project Area, and the species has been observed foraging in the Project Area.

Prairie falcon (*Falco mexicanus*)

--/CSC

The prairie falcon forages in open areas and nests on cliffs or ledges.

*Potential for Occurrence:* Suitable habitat is present within the Project Area and the Diamond A Ranch property for the prairie falcon. This species is known to occur in Sunol Regional Wilderness Park, and forages in the Project Area.

Tule elk (*Cervus elaphus nannodes*)

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Tule elk inhabit brush, scrub, and herbaceous habitats.

*Potential for Occurrence:* The San Antonio tule elk herd resides in the Project Area, and is one of the healthiest herds in the Mt. Hamilton Range. There were 21 known elk in the herd in 1984 (Alameda County 1984), 70 elk as of 1995 (WRA 2003c), and an estimated 58 elk in the herd as of surveys in 2007.

Mountain lion (*Puma concolor*)

--/SP

The mountain lion is found in nearly all habitats, except xeric regions of the Mojave and Colorado deserts that do not support mule deer populations.

*Potential for Occurrence:* Mountain lions are known to use the Project Area (Alameda County 1984).

Alameda whipsnake (*Masticophis lateralis euryxanthus*)

FT/CT

The preferred habitat for the Alameda whipsnake is a mosaic of open coastal scrub or chaparral and grassland with rocky outcrops. Ideal habitat for the Alameda whipsnake includes communities that support mixed chaparral and coastal scrub, and annual grassland and oak woodland habitats adjacent to scrub habitats. The Alameda whipsnake forages in a variety of communities, including grassland and open woodland. Small mammal burrows, rock outcrops, talus, and similar types of shelter provide alternative habitat for temperature regulation, protection from predators, sites for egg laying, and hibernation dens.

*Potential for Occurrence:* The Alameda whipsnake is known to be present in many localities within the Project Area and the Diamond A Ranch property, and also inhabits Sunol Regional Wilderness, immediately south of the Project Area. Suitable habitat is present in the Project Area's coastal scrub.

Bald eagle (*Haliaeetus leucocephalus*)

Formerly FE (delisted), BGEPA/CE

The bald eagle nests and forages on inland lakes, reservoirs, and rivers. Winter foraging occurs at lakes and along major rivers.

*Potential for Occurrence:* Several bald eagle pairs are known to winter at San Antonio Reservoir, just north of the Project Area, and at Calaveras Reservoir, south of the Project Area.

American peregrine falcon (*Falco peregrinus anatum*)

SE/FPS

The American peregrine falcon nests in cliffs and outcrops.

*Potential for Occurrence:* Peregrine falcons were reintroduced to Mount Diablo in 1989 and were nesting there by 1994. Peregrine falcons are also known from Sunol Regional Park.

Western pond turtle (*Actinemys marmorata*)

FSC/CSC

The preferred habitat for the western pond turtle is freshwater ponds and slow streams, marshes, rivers, and irrigation ditches with upland sandy soils for laying eggs. Western pond turtles occupy rivers, streams, lakes, ponds, wetlands, reservoirs, and brackish estuarine waters as high as 6,500 feet above sea level. They prefer habitats with large areas of cover and suitable basking sites. These turtles also require refugia for overwintering, such as rocks, logs, mud, submerged vegetation, and undercut areas along banks.

*Potential for Occurrence:* Pond turtles are found in Alameda Creek, approximately two miles west of the potential quarry site, in Alameda Creek below the confluence with Calaveras Creek where water is present year-round, in Arroyo Hondo, in side channels of Alameda Creek below the Sunol Water Temple, and in at least one other pond within the watershed. An unidentified turtle species has been observed in at least one stock pond in the Diamond A Ranch and these are assumed to be western pond turtles.

Cooper's hawk (*Accipiter cooperi*)

--/CSC

The Cooper's hawk nests in riparian growths of deciduous trees and live oak woodlands.

*Potential for Occurrence:* Suitable habitat for the Cooper's hawk is present in the Project Area, and there are CNDDDB records for this species about 1 mile south of the Project Area (CDFG 2007). Cooper's hawk may nest in any of the Project Area's riparian trees.

Sharp-shinned hawk (*Accipiter striatus*)

--/CSC

The sharp-shinned hawk nests in riparian growths of deciduous trees and live oaks.

*Potential for Occurrence:* Suitable nesting habitat for the sharp-shinned hawk is present in the Project Area, and there are CNDDDB records of this species southeast of the Project Area (CDFG 2007). The sharp-shinned hawk may nest in any of the Project Area's riparian trees.

Northern harrier (*Circus cyaneus*)

--/CSC

The northern harrier nests and forages in wet meadows and pastures

*Potential for Occurrence:* The northern harrier may occur in the project vicinity year-round.

White-tailed kite (*Elanus leucurus*)

--/3511, FPS

The white-tailed kite nests near wet meadows and open grasslands, in dense oak, willow or other large tree stands. It forages on voles and other small mammals.

*Potential for Occurrence:* The Project Area has suitable habitat for the white-tailed kite, and it likely forages in the Project Area's open grasslands.

Loggerhead shrike (*Lanius ludovicianus*)

--/CSC

The loggerhead shrike inhabits grasslands and open woodlands with scattered shrubs. It nests in riparian and other woodlands and forages over open country.

*Potential for Occurrence:* The loggerhead shrike may be present in suitable grassland and woodland habitat in the Project Area.

Pallid bat (*Antrozous pallidus*)

--/CSC

The pallid bat roosts in trees and forages over open grassland.

*Potential for Occurrence:* This pallid bat is present in Sunol Park, approximately 0.5 miles south of the quarry site, and could occur throughout the watershed.

Western red bat (*Lasiurus blossevillii*)

--/CSC

The western red bat roosts primarily in the foliage of trees or shrubs. Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas.

*Potential for Occurrence:* The western red bat likely roosts in large sycamore and oak trees in the Project Area, particularly in the Project Area's riparian woodlands.

Hoary bat (*Lasiurus cinereus*)

--/CSC

The hoary bat roosts in foliage in coniferous and deciduous trees.

*Potential for Occurrence:* The hoary bat may roost in tree foliage in any of the trees in Project Area.

Yuma myotis (*Myotis yumanensis*)

FSC/--

Optimal habitat for the Yuma myotis is open forests or woodlands with sources of water and flying insects. Nursery colonies are in caves, buildings, or crevices.

*Potential for Occurrence:* The Yuma myotis likely roosts in large tree cavities or under tree bark in any of the trees in the Project Area. The Yuma myotis is known to occur along Alameda Creek, about 2 miles west of the quarry site.

San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*)

FSC/CSC

The San Francisco dusky-footed woodrat inhabits hardwood forests and scrub communities with understory.

*Potential for Occurrence:* Suitable habitat is present in the Project Area for the San Francisco dusky-footed woodrat, and there are nearby records of this species.

Bay checkerspot butterfly (*Euphydras editha bayensis*)

FT/--\*

The Bay checkerspot butterfly inhabits serpentine bunchgrass and valley needlegrass grasslands supporting native plantain (*Plantago erecta*) and annual owl's-clover (*Castilleja* spp.).

*Potential for Occurrence:* Suitable habitat may exist for the Bay checkerspot butterfly in the Project Area. Entomological Consulting Services (2004, 2005) carried out intensive surveys for the Bay checkerspot butterfly in 2004 and 2005 on SFPUC lands within the vicinity of the Project Area. The species was not found, and the author concluded that habitat quality on the watershed for this species was poor.

Callippe silverspot butterfly (*Speyeria callippe callippe*)

FE/--\*

The Callippe silverspot butterfly occurs in grasslands, including hilly terrain with a mixture of topographic relief, in areas with the larval food plant *Viola pedunculata* and adult nectar sources such as California buckeye (*Aesculus californica*) nearby. Adults visit the margins of



oak woodlands and riparian areas in search of nectar, as well as disturbed areas if favored nectar plants grow there.

*Potential for Occurrence:* Entomological Consulting Services (2004) found a population of Callippe silverspots on SFPUC Alameda watershed land that is intermediate in appearance between the listed subspecies and a related, non-endangered subspecies.

San Joaquin kit fox (*Vulpes macrotis mutica*)

FE/CT

The San Joaquin kit fox inhabits annual grasslands or open scrublands with loose textured soils for burrowing and a suitable prey base.

*Potential for Occurrence:* Suitable habitat and prey are available for the San Joaquin kit fox at the Project Area, although Apperson Ridge is west of this species' known range. There were no recent records of this species in the project vicinity until a single reported sighting in Sunol in 2006.

Foothill yellow-legged frog (*Rana boylei*)

FSC/CSC

The foothill yellow-legged frog requires shallow, fast flowing streams with a cobblestone substrate. It inhabits partly shaded streams with riffles and quiet pools absent of predatory fish. Yellow-legged frogs breed in shallow, flowing streams with cobbles, sunny banks, and some riffles.

*Potential for Occurrence:* Apperson Creek may support foothill yellow-legged frogs.

California horned lizard (*Phrynosoma coronatum frontale*)

FSC/CSC

The California horned lizard inhabits patchy open areas with sandy soils.

*Potential for Occurrence:* There is a 1995 CNDDDB record of the California horned lizard about 4 miles east of the Project Area (CDFG 2007). Suitable habitat may be present for this species.

Tricolored blackbird (*Agelaius tricolor*)

FSC/CSC

Tricolored blackbirds nest in highly localized colonies in emergent wetlands, riparian thickets, wet Himalaya blackberry patches in irrigated pastures, and rice fields. Tricolored blackbirds may use open grasslands for foraging during breeding season.

*Potential for Occurrence:* There is a recent CNDDDB record for the tricolored blackbird about 5 miles east of the quarry site (CDFG 2007). Although no colonies are known to occur in the Project Area and the Diamond A Ranch property, suitable habitat is present for this species along drainages and near ponds in the Project Area and the Diamond A Ranch property.

Bell's sage sparrow (*Amphispiza belli belli*) (nesting)

--/CSC

The Bell's sage sparrow inhabits semi-open dry chaparral and coastal sage scrub.

*Potential for Occurrence:* Suitable habitat is present within the Project Area for the Bell's sage sparrow.

Great blue heron (*Ardea Herodias*)

--/\*

The Great blue heron nests in trees along lakes and estuaries.

*Potential for Occurrence:* The great blue heron has previously been observed in the Project Area (Alameda County 1984), and is a likely resident at San Antonio and Calaveras Reservoirs.

Long-eared owl (*Asio otus*) (nesting)

--/CSC

The long-eared owl nests in dense riparian and oak woodlands.

*Potential for Occurrence:* The long-eared owl may nest in the Project Area's dense riparian and oak woodlands. Suitable habitat is present throughout the Project Area and the Diamond A Ranch property.

Western burrowing owl (*Athene cunicularia hypugaea*)

FSC/CSC

The western burrowing owls need open, well-drained terrain with sparse vegetation with available burrows (e.g., California ground squirrel) for refuge and nesting. In central California, burrowing owls typically forage and breed in areas such as grasslands, vernal pool grasslands, fallow agricultural fields, and open oak woodlands. During the breeding season, they may also need enough permanent cover and taller vegetation within their foraging range to find prey.

*Potential for Occurrence:* The western burrowing owl may nest and forage in grassy areas with friable soils. The Project Area is within the known range for this species, although there are no nearby CNDDDB records (CDFG 2007).

Ferruginous hawk (*Buteo regalis*)

FSC/CSC

The ferruginous hawk inhabits dry open country with a variety of habitats. It forages in open grasslands and agricultural fields.

*Potential for Occurrence:* The ferruginous hawk winters in the Bay Area and suitable foraging habitat is present within the Project Area.

Townsend's western big-eared bat (*Corynorhinus townsendi townsendii*)

FSC/CSC

Townsend's western big-eared bats can occur in a variety of habitats throughout California, but they are most commonly associated with desert scrub, mixed conifer forest, and piñon-juniper or pine forest habitat. Suitable breeding habitat for Townsend's big-eared bat may be found in caves, tunnels, mines, and buildings in rock outcrop land cover types

away from human disturbance. Suitable foraging habitat may be found in Diablan sage scrub, oak woodland, riparian woodland, evergreen oak woodland, and serpentine pine woodland chaparral land cover types.

*Potential for Occurrence:* The Townsend's western big-eared bat may roost in hollow trees in the Project Area, or nearby buildings, barns, or structures. The Townsend's western big-eared bat has been observed on SFPUC lands in the Alameda Creek watershed (California Natural Diversity Database 2006).

#### Berkeley kangaroo rat (*Dipodomys heermanni berkeleyensis*)

FSC/--

The Berkeley kangaroo rat once inhabited open grasslands, open chaparral, and blue oak-gray pine woodland, with thin soils, bare ridgetops, and rocky outcrops.

*Potential for Occurrence:* The Berkeley kangaroo rat has been presumed extinct, although 8 kangaroo rats were trapped in neighboring Ohlone Regional Wilderness by East Bay Regional Park District biologists since 2000, and they could potentially be this sub-species. The last verified record of the Berkeley kangaroo rat in the project vicinity was from Calaveras Dam in 1940 (CDFG 2007).

#### Long-eared myotis (*Myotis evotis*)

FSC/--

The long-eared myotis inhabits brush, woodland, and forest habitats, and prefers coniferous habitat types. Nursery colonies can occur in buildings, crevices, spaces under tree bark, and snags.

*Potential for Occurrence:* The long-eared myotis may roost in large tree cavities or under tree bark in any of the trees in Project Area.

#### Fringed myotis (*Myotis thysanodes*)

FSC/--

The fringed myotis inhabits a wide variety of habitats. Optimal habitats are valley-foothill hardwood and hardwood-conifer types. The fringed myotis uses caves, buildings, or crevices for roosting and nursery colonies.

*Potential for Occurrence:* The fringed myotis may roost in large tree cavities or under tree bark in any of the trees in Project Area.

#### Long-legged myotis (*Myotis volans*)

FSC/--

The long-legged myotis is most common in woodland and forest habitats above 4000 feet. It uses trees and caves for roosting, and hollow trees or spaces under tree bark for nursery colonies.

*Potential for Occurrence:* The long-legged myotis may roost in large tree cavities or under tree bark in Project Area trees.

American badger (*Taxidea taxus*)

--/CSC

The American badger inhabits open herbaceous and shrub habitat with dry, friable soils.

*Potential for Occurrence:* Suitable habitat for the American badger may be present in Project Area and Diamond A Ranch.

Vernal pool tadpole shrimp (*Lepidurus packardii*)

FE/--

The vernal pool tadpole shrimp inhabits vernal pools.

*Potential for Occurrence:* The Project Area lacks suitable habitat for the vernal pool tadpole shrimp.

### *Plant Species of Concern*

The Conservation Plan area corresponds to the San Francisco Bay Area subregion of the Central Western California region of the California Floristic Province (Hickman 1993). There are historic records of 32 special-status plants within the regional vicinity of Apperson Ridge, according to the California Natural Diversity Database (CDFG 2007), California Native Plant Society Electronic Inventory (CNPS 2007), USFWS (USFWS 2007), and biological literature for the region. The Project Area has suitable habitat for 12 of these 32 species: bentflowered fiddleneck, big-scale balsamroot, big tarplant, round-leaved filaree, Mt. Diablo fairy lantern, Mt. Hamilton coreopsis, Hospital Canyon larkspur, fragrant fritillary, Diablo helianthella, Hall's bush mallow, robust monardella, and most beautiful jewelflower (CDFG 2007; CNPS 2007; USFWS 2007).

This Conservation Plan covers plants that are federally or state listed and those on the California Native Plant Society (CNPS) Lists 1 and 2. Plants on CNPS Lists 3 and 4, as well as those currently listed as Unusual and Significant in Alameda County will be included in future botanical surveys and conservation planning for the project, to be conducted prior to the initiation of the CEQA process for Revised SMP-17 (see avoidance measure SURVEY-5 in Section 2).

Diablo helianthella (*Helianthella castanea*)

FSC/--/CNPS List 1B.2

Diablo helianthella is associated with thin, rocky, well-drained soils on east-facing slopes. It is found in grassy openings in woodland, chaparral, and coastal scrub, often at the transition zone between woodland and chaparral areas.

*Potential for Occurrence:* There are recent CNDDDB records of Diablo helianthella about 1 mile south and about 1 mile northeast of the Project Area, and several more within 5 miles of the Project Area (CDFG 2007). A Diablo helianthella population was found in 2003 at the north end of Wahaub Ridge on SFPUC watershed lands (Jones & Stokes 2006). Suitable habitat is present in the Project Area and the Diamond A Ranch property.

Bent-flowered fiddleneck (*Amsinckia lunaris*)

--/--/CNPS List 1B.2

Bent-flowered fiddleneck grows in coastal bluff scrub, cismontane woodland, and in valley and foothill grassland.

*Potential for Occurrence:* Suitable habitat is present within the project footprint for bent-flowered fiddleneck. The species is known from the East Bay hills (Oakland, Briones, and Las Trampas) but has not been documented from the Project Area (CDFG 2007).

Big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*)

FSLC/--/CNPS List 1B.2

Big-scale balsamroot grows in chaparral, cismontane woodland, and grasslands, sometimes in serpentine soils.

*Potential for Occurrence:* Suitable habitat is present within project footprint for big-scale balsamroot. The species is known from Fairmont Ridge and Altamont Hills in Alameda County but has not been documented from the Project Area (CDFG 2007).

Big tarplant (*Blepharizonia plumose* var. *plumose*)

FSC/--/CNPS List 1B.1

Big tarplant grows on serpentine soils in chaparral, cismontane woodland, and valley and foothill grassland.

*Potential for Occurrence:* Although serpentine soils do not occur on the project site, suitable habitat is otherwise present within the project footprint. Big tarplant may be present in the Project Area where suitable habitat exists. The species is known locally from Corral Hollow, Tesla, and the Walnut Creek areas but has not been documented in the Project Area (CDFG 2007).

Round-leaved filaree (*California macrophylla*)

FSC/--/CNPS List 1B.1

Round-leaved filaree generally occurs in grassland on friable clay or clay loam soils. It has also been found in nonnative grassland on clay soils with relatively low cover of annual grasses.

*Potential for Occurrence:* Suitable habitat is present within project footprint. Known most recently from eastern Alameda County but not documented from the Project Area (CDFG 2007)

Mt. Diablo fairy lantern (*Calochortus pulchellus*)

--/--/CNPS List 1B.2

Cismontane or riparian woodlands, valley and foothill grassland

*Potential for Occurrence:* Suitable habitat is present within the project footprint. Only one documented location is known from Alameda County, on Las Trampas Ridge (CDFG 2007).

Mt. Hamilton coreopsis (*Coreopsis hamiltonii*)

--/--/CNPS List 1B.2

Cismontane woodland (rocky sites).

*Potential for Occurrence:* Suitable habitat is present in the Project Area for Mt. Hamilton coreopsis, but the CNDDDB has no recent, nearby records for it (CDFG 2007). The Diamond A Ranch property is generally lower in elevation than the species' known range.

Hospital Canyon larkspur (*Delphinium californicum* ssp. *Inferius*)

--/--/CNPS List 1B.2

Hospital Canyon larkspur grows in chaparral openings and cismontane woodland.

*Potential for Occurrence:* Suitable habitat is present for Hospital Canyon larkspur in the Project Area, but the CNDDDB has no recent, nearby records for it (CDFG 2007).

Fragrant fritillary (*Fritillaria liliacea*)

FSC/--/CNPS List 1B.2

Fragrant fritillary occurs in coastal scrub, valley and foothill grassland, and coastal prairie. It grows on heavy clay soils, often on ultramafic soils, and is often a serpentine-associated plant.

*Potential for Occurrence:* Suitable habitat exists within the project footprint for fragrant fritillary, and the species may be present in the Project Area where suitable habitat exists. The nearest documented location is on Fairmont Ridge in western Alameda County (CDFG 2007).

Hall's bush mallow (*Malacothamnus hallii*)

--/--/CNPS List 1B.2

Hall's bush mallow grows in chaparral and coastal scrub.

*Potential for Occurrence:* Suitable habitat exists for Hall's bush mallow on the eastern slopes of Apperson Ridge. The nearest documented location is at Mount Diablo State Park (CDFG 2007).

Robust monardella (*Monardella villosa* ssp. *globosa*)

--/--/CNPS List 1B.2

Robust monardella occurs in openings in northern coastal scrub, chamise chaparral, serpentine chaparral, and mixed evergreen forest; it also occurs in grassland adjacent to these plant communities.

*Potential for Occurrence:* Potentially suitable habitat exists within the project footprint for robust monardella. The nearest documented location is at Las Trampas Ridge (CDFG 2007).

Most beautiful jewelflower (*Streptanthus albidus* ssp. *Peramoenus*)

FSC/--/CNPS List 1B.2

Most-beautiful jewelflower is generally found in grassland dominated by native perennial grasses or in open grassland dominated by nonnative annual grasses with a relatively low cover of nonnative grasses. It is also found on rock outcrops or grassy openings in serpentine chaparral or where serpentine grassland or chaparral habitats transition to oak woodland.

*Potential for Occurrence:* There are recent CNDDDB records for most beautiful jewelflower about 2 miles south and about 4 miles west of the Project Area (CDFG 2007). The species was observed during 2006 botanical surveys for the Calaveras Dam project. However, serpentine substrates and chaparral do not occur within the project footprint and woodland understories are generally degraded. The species may occur downslope of the Project Area on the eastern flanks of Apperson Ridge.

Tiburon Indian paintbrush (*Castilleja affinis* ssp. *neglecta*)  
FE/ST/CNPS List 1B.2

Tiburon Indian paintbrush occurs on rock outcrops and north- to west-facing slopes in serpentine grassland at elevations between 350 and 1,300 feet.

*Potential for Occurrence:* Tiburon Indian paintbrush is known from only six occurrences in the Bay Area.

Presidio clarkia (*Clarkia franciscana*)  
FE/SE/CNPS List 1B.1

Presidio clarkia occurs on serpentine outcrops, usually in grassland but sometimes in openings in coastal sage scrub or maritime chaparral. Serpentine foothill pine–chaparral woodland and grassland is also potential habitat.

*Potential for Occurrence:* Presidio clarkia is known from fewer than five occurrences in the Bay Area.

#### *Sensitive Plant Communities Known to Occur in the Project Vicinity:*

Sycamore alluvial woodland  
G1 S1.1

Valley oak woodland  
G3 S2.1

#### *Status Codes:*

Federal Categories (U.S. Fish and Wildlife Service)  
FE = Listed as Endangered by the Federal Government  
FT = Listed as Threatened by the Federal Government  
FPE = Proposed for Listing as Endangered  
FPT = Proposed for Listing as Threatened  
FC = Candidate for Federal Listing  
FSC = Federal Species of Concern  
BPA = Federal Bald Eagle Protection Act

State Categories (California Department of Fish and Game)  
CE = Listed as Endangered by the State of California  
CT = Listed as Threatened by the State of California  
CR = Listed as Rare by the State of California  
CSC = California Species of Special Concern  
FPS = California Fully Protected Species  
\* = Special Animals

California Native Plant Society (CNPS)  
List 1A = Plants presumed extinct in California  
List 1B = Plants rare, threatened, or endangered plants in California and elsewhere  
List 2 = Plants rare, threatened, or endangered in California but common elsewhere  
0.1 = Seriously endangered in California  
0.2 = Fairly endangered in California

0.3= Not very endangered in California

The Nature Conservancy (TNC) – Global Heritage Program rarity ranks (for sensitive plant communities)

G1: Fewer than 6 viable occurrences worldwide and/or 2000 acres

G2: 6-20 viable occurrences worldwide and/or 2000-10,000 acres

G3: 21-100 viable occurrences worldwide and/or 10,000-50,000 acres

G4: Greater than 100 viable occurrences worldwide and/or greater than 50,000 acres

Threat Ranks

0.1: Very threatened

0.2: Threatened

0.3: No current threats known

State Rarity Ranks:

S1: Fewer than 6 viable occurrences statewide and/or 2000 acres

S2: 6-20 viable occurrences statewide and/or 2000-10,000 acres

S3: 21-100 viable occurrences statewide and/or 10,000-50,000 acres

S4: Greater than 100 viable occurrences statewide and/or greater than 50,000 acres



## APPENDIX C

### TAKE AVOIDANCE MEASURES

As specified in avoidance measure TAKE-1, in an effort to avoid direct take of special-status species, ODS will comply with the following pre-project avoidance measures.

Notwithstanding anything to the contrary in this Conservation Plan, ODS will have no obligation to share any surveys with the Conservation Groups until ODS provides the surveys to any public agency or to the general public.

#### **Invertebrates**

In an effort to avoid direct impacts to special-status invertebrates, particularly the callippe silverspot butterfly (FE/--) and Bay checkerspot butterfly (FT/--), the following mitigation measures shall be adhered to:

*Callippe Silverspot Butterfly*

*Bay Checkerspot Butterfly*

**INV-2:** Federal protocol-level surveys for these listed butterfly species will be conducted by a consultant hired by ODS, and approved by all Parties, on and adjacent to SMP-17 and Revised SMP-17, at least 3 years before any mining activity at SMP-17. Two consecutive years of butterfly surveys shall be conducted during the flight season for these butterflies. Over five years, three annual surveys will be conducted, one every other year, for butterfly larval host plants (e.g., *Viola pedunculata*, *Plantago erecta*, *Castilleja densiflorus* and *C. exserta*). These surveys shall be conducted by a qualified botanist in conjunction with the rare plant surveys required under avoidance measures SURVEY-5 and PLANT-2 prior to ground-disturbance activities on Apperson Ridge. These surveys shall be shared with the Conservation Groups.

**INV-3:** All populations of butterfly host plants located in the Project Area shall be mapped and roads and the conveyor belt shall be designed to avoid them whenever possible, whether or not they are being used by butterflies at the time of the initial surveys. Where avoidance is not practicable, feasible or consistent with good engineering practices, for example, in the direct footprint of the SMP-17 Project Area, the goal is to fully mitigate for any unavoidable impacts, using the agreed upon mitigation measures and ratios included in this Conservation Plan. In such event, the Conservation Groups will not advocate for a jeopardy opinion, denial of a permit or to halt the project.

**INV-4:** As part of the initial surveys, all populations of butterfly host plants located in the Project Area shall be inspected by a qualified invertebrate biologist to determine whether or not they are being used by endangered butterflies for reproduction. If it is determined that they are being used for reproductive purposes by endangered butterflies, then the project proponent shall engage in an informal consultation with the USFWS prior to proceeding any further with any project activities, unless an HCP has been signed with the USFWS that covers the butterfly species.

**INV-5:** Any butterfly host plant populations found shall be monitored by a consultant hired by ODS, and approved by all Parties, on a biennial basis until the project's construction phase is complete, and the operational phase is implemented. The consultant will prepare a biennial report, as needed, which shall be shared with the Conservation Groups and relevant state and federal regulatory agencies.

**INV-6:** If populations of threatened or endangered butterflies are found to be using Apperson Ridge during the initial surveys, then any such populations shall be monitored, using methods and protocols recommended by the USFWS. Results of the monitoring data shall be made available to the USFWS.

**INV-7:** If endangered butterflies are reproducing in the Project Area, then the project proponent shall prepare a Butterfly Protection Plan in coordination with USFWS, unless an HCP has been signed with the USFWS that covers the listed butterflies. The Butterfly Protection Plan shall include, but not be limited to, the following elements:

- Pre-construction surveys shall be conducted during the period of identification for larval host plants and butterfly larvae in the flowering and/or breeding season immediately prior to ground-disturbance on Apperson Ridge.
- New roads on Apperson Ridge shall be limited as much as possible to existing trails and roads, and roads and the conveyor belt shall avoid larval host plants to the greatest extent possible.
- To the greatest extent possible grassland habitat on Apperson Ridge within the leased property shall be restored and enhanced to maintain and expand any existing populations of butterfly host plants. In consultation with the USFWS and CDFG, ODS will implement a management plan aimed at limiting invasive plant species within suitable butterfly habitats, revegetating with native grassland species, and if possible, establishing new populations of butterfly host plants.
- Where avoidance is not practicable, feasible or consistent with good engineering practices, for example, in the direct footprint of the SMP-17 Project Area, the goal is to fully mitigate for any unavoidable impacts, using the agreed upon mitigation measures and ratios included in this Conservation Plan. In such event, the Conservation Groups will not advocate for a jeopardy opinion, denial of a permit or to halt the project.

**INV-8:** If grasslands occupied by callippe silverspot or bay checkerspot butterfly will potentially be impacted during the construction or operational phase of SMP-17, then ODS shall initiate informal consultation with the USFWS to determine the need for formal consultation and preparation of a Biological Assessment and Biological Opinion under the ESA, unless an HCP has been signed with the USFWS that covers these butterfly species.

## **Fish**

In an effort to avoid direct impacts to rainbow trout (---) in San Antonio Reservoir and its tributaries, the following avoidance measures shall be adhered to:

### *Rainbow Trout*

**FISH-1:** ODS will implement a detailed erosion and sedimentation control plan prior to the start of any construction, as required in the 1984 EIR (Alameda County 1984). This plan will be subject to input from the SFPUC and approval by the RWQCB and CDFG.

**FISH-2:** ODS will work with the RWQCB and CDFG to implement a detailed spill response protocol to prevent the potential for any toxic materials from reaching any water bodies hydrologically connected to Apperson Creek or San Antonio Reservoir.

**FISH-3:** USGS studies show that fire retardant mixtures can damage gill tissues of fish and are especially harmful to newborn and juvenile fish. Foam fire retardant spills in fish habitat have caused fish kills. ODS will work with the California Department of Forestry and local fire departments to prepare a fire prevention and response plan for Apperson Ridge that ensures that firefighting chemicals that can be toxic to fish do not end up in Apperson Creek or any of the other creeks in the project vicinity hydrologically connected to San Antonio Reservoir.

### **Amphibians**

In an effort to avoid direct impacts to special-status amphibians, particularly the California red-legged frog (FT/CSC), foothill yellow-legged frog (--/CSC), and California tiger salamander (FT/CSC) the following avoidance measures shall be adhered to:

#### *California Red-Legged Frog* *Foothill Yellow-Legged Frog*

**AMPH-4:** All of Alameda County's California Red-Legged Frog ("CRLF") Avoidance Program measures (WRA 2003a) shall be adhered to. These include: avoidance of red-legged frog breeding areas during construction, mining, and in the alignment of the road; pre-construction surveys and worker education; authority to halt construction if injured or dead frogs are found; maintaining a buffer zone of up to 150 feet between construction activity and potential breeding locations; an erosion plan to control discharge of sediments; and a storm water pollution prevention plan to maintain water quality. Since potential foothill yellow-legged frog ("FYLF") habitat is also considered potential habitat for CRLF, these protection measures will also apply for FYLF as well.

**AMPH-5:** If jurisdictional wetlands will be impacted during the construction or operational phase of SMP-17, an informal consultation with the USFWS will be required to determine the need for formal consultation and preparation of a Biological Assessment and Biological Opinion (required by the ESA) for the CRLF and CTS, unless an HCP has been signed with the USFWS that covers the CRLF and CTS.

**AMPH-6:** Whether or not a Biological Assessment and Biological Opinion are required, ODS shall adhere to the measures outlined in the USFWS Programmatic Biological Opinion

(Federal Register, 1999) for impacts to the CRLF, during the initial construction phase of SMP-17:

- The name and credentials of a biologist qualified to act as a construction monitor shall be submitted to the USFWS for approval at least 15 days prior to commencement of work.
- The USFWS-approved biologist shall conduct pre-construction surveys within aquatic habitat in the Project Area, at least two weeks prior to the onset of construction activities. Surveys shall be completed for all life cycle stages of CRLF and FYLF (e.g., egg masses, tadpole, juveniles, and adults) that may occur within the Project Area. Surveys will conform with the USFWS Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog (USFWS 2005). These surveys shall be shared with the Conservation Groups.
- If adult CRLF or FYLF, tadpoles or eggs are found within the construction disturbance zone, the USFWS-approved biologist shall contact the USFWS to determine if moving any of these lifestages is appropriate (this may be necessary at the two ponds immediately north of the proposed quarry site and adjacent to the quarry access road, and from any other ponds immediately adjacent to the access road where CRLF are present). If the USFWS approves moving the animals, the approved biologist shall be allowed sufficient time to move them from the construction sites before work activities begin. If no CRLF or FYLF are detected during these surveys, construction-related activities may proceed without further requirements for the protection of individuals, although habitat protection measures (i.e., avoidance of intermittent drainages and riparian habitat) shall still be observed.
- The USFWS-approved biologist will remove and destroy from within the project area any individuals of non-native species, such as bullfrogs, crayfish, and centrarchid fishes, to the maximum extent possible.
- Exclusionary fencing, such as silt fences, shall be installed around the process ponds and around all construction areas that are within 100 feet of or adjacent to potential CRLF or FYLF habitat. Once fencing is in place, it shall be maintained by ODS until completion of construction within or adjacent to the enclosure.
- The monitoring biologist will demarcate construction avoidance areas in the field and monitor construction activities within 300 feet of aquatic habitat for CRLF. The demarcation shall remain on-site until all initial vegetation clearing and habitat disturbance is completed.
- If waterbodies require dewatering, the intakes will be screened with a maximum mesh size of 5 millimeters.

### *California Tiger Salamander*

**AMPH-7:** A preconstruction survey within a sufficient period so as to maintain the relevancy and utility of the survey will be conducted by a qualified biologist at each site to identify suitable California tiger salamander (“CTS”) burrow aestivation areas. Aestivation habitat will be defined as the presence of two or more small mammal burrows greater than 1 inch in diameter within a 10-foot-diameter area and within 10 feet of proposed construction sites (i.e., the presence of a single isolated gopher hole would not be considered habitat). These surveys shall be shared with the Conservation Groups. As feasible within the context

of the work area, aestivation areas will be temporarily fenced and avoided during the construction phase of quarry operations.

- At locations where aestivation burrows are identified and cannot be avoided, with approval from the USFWS, aestivation burrows will be excavated by hand prior to construction and any individual CTS found will be moved to natural burrows or artificial burrows constructed of PVC pipe within 0.25 mile of the construction site.
- To ensure compliance with these measures and minimize CTS take, a qualified biological monitor will be present during all construction operations at locations with suitable aestivation burrows. Construction sites where potential habitat has been identified will be surveyed by a qualified biologist for CTS. Surveys will be appropriately timed with respect to salamander activity and proposed construction activities. Surveys will conform with the USFWS *Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander* (USFWS 2003). These surveys shall be shared with the Conservation Groups.
- Surveys will include drift fences and pitfall traps within construction sites containing suitable habitat for CTS (at the discretion of the CDFG), to identify and relocate animals. Following removal of individual CTS, construction areas containing suitable habitat for CTS (at the discretion of the CDFG), will be fenced with temporary silt fencing.

## Reptiles

In an effort to avoid direct impacts to the special-status reptiles, particularly the Alameda whipsnake (FT/CT) and western pond turtle (--/CSC) the following avoidance measures shall be adhered to:

### *Alameda Whipsnake*

**REPT-1:** Construction-related impacts on individual Alameda whipsnake (“AWS”) will be minimized and/or avoided through the development and implementation of an AWS protection and monitoring plan, to be approved by the USFWS during informal consultation under the federal ESA, unless an HCP has been signed with the USFWS that covers the AWS. During this informal consultation, the USFWS will also determine the need for formal consultation and preparation of a Biological Assessment and Biological Opinion for the AWS. Protective measures outlined for the CRLF will apply to all areas of known or potential habitat for the AWS. In addition, the AWS protection plan will include:

- Sites within potential AWS habitat will be hand-cleared, or a qualified biologist will do surveys and relocate any snakes immediately prior to equipment clearing. Any surveys shall be shared with the Conservation Groups.
- Activities that could harm or harass AWS will be avoided or minimized.

### *Western Pond Turtle*

**REPT-2:** Prior to project initiation, and within a sufficient period so as to maintain the relevancy and utility of the surveys, a qualified biologist who is permitted by the CDFG to

move western pond turtles (“WPT”) and their nests shall perform WPT surveys within suitable habitat in proximity to areas where ground disturbance or increased construction activity will occur. These surveys shall be shared with the Conservation Groups. Surveys and subsequent actions shall include the following:

- Surveys shall be conducted for nests as well as individual WPT.
- No work within suitable habitat will proceed until the work area is determined to be free of turtles or their nests.
- If WPT are identified within work areas, ODS will hire a qualified biologist who will be responsible for relocating them.
- If a nest is located within a work area, a qualified biologist will move the eggs to a suitable facility for incubation, and release hatchlings into appropriate nearby habitat in late fall.
- If WPT are found during initial surveys a qualified biologist shall be present when project related activities within or adjacent to suitable aquatic habitat for WPT is occurring and will be responsible for relocating adult turtles that move into work areas.

## **Birds**

In an effort to avoid direct impacts to special-status birds, including the western burrowing owl (FSC/CSC), raptors including the bald eagle (FD/CE/CFP), and nesting passerine birds, the following avoidance measures shall be adhered to:

### *Western Burrowing Owl*

**BIRD-1:** No more than two weeks before construction, a survey for burrows and burrowing owls will be conducted by a qualified biologist within 500 feet of all suitable burrowing owl habitat in the Project Area. The survey will conform to the protocol described by the California Burrowing Owl Consortium (1997), *Burrowing Owl Survey Protocol and Mitigation Guidelines*, which includes up to four surveys on different dates if there are suitable burrows present. These surveys shall be shared with the Conservation Groups.

**BIRD-2:** If occupied owl burrows are found within the survey area, a determination will be made by a qualified biologist, in consultation with the CDFG, as to whether or not work will affect the occupied burrows or disrupt reproductive behavior. If it is determined that construction will not affect occupied burrows or disrupt breeding behavior, construction will proceed without any restriction or mitigation measures.

**BIRD-3:** If it is determined that construction will physically affect occupied burrows or disrupt reproductive behavior during the nesting season (March 1 through July 31), then avoidance is the only mitigation available. Construction will be delayed within 300 feet of occupied burrows until it is determined that the subject owls are not nesting or until a qualified biologist determines that juvenile owls are self-sufficient or are no longer using the natal burrow as their primary source of shelter. ODS shall inform the Conservation Groups within 10 days of any determination made under this provision.

**BIRD-4:** If it is determined that construction will affect owl occupied burrows outside of breeding season (August 1 through February 28), the subject owls will be trapped by a qualified burrowing owl biologist and actively relocated from the occupied burrow(s). Active relocation is the process of moving owls from occupied burrows to other burrows off-site, by trapping owls and temporarily holding them in enclosures on relocation sites, then releasing them at the relocation sites. ODS will install at least two artificial burrows suitable for burrowing owls for each owl relocated, within 300 feet of each occupied burrow, before owls are trapped and relocated.

**BIRD-5:** If owls are actively relocated, the artificial burrows will be maintained by ODS in a condition that will provide long-term nesting habitat, and ensure that the burrows do not become buried, for a period of five (5) years, or until the relocated owls are documented to have moved into natural burrows. The artificial burrows and a 6 acre buffer around the burrows will be maintained for burrowing owls and protected from development and disturbance for a period of five (5) years, or until the relocated owls are documented to have moved into natural burrows.

#### *Raptors Including Bald Eagle*

**BIRD-6:** A survey to identify active raptor nests will be conducted by a qualified biologist no more than two weeks before the start of construction at project sites from February 1 through July 30. These surveys shall be shared with the Conservation Groups.

- In consultation with the CDFG and USFWS, trees with unoccupied raptor nests (stick nests or cavities) may only be removed prior to March 1, or following the nesting season.
- Construction activities within 0.5 miles of an active bald or golden eagle nest may not occur between February 1 and July 31.
- Active raptor nests located within 500 feet of the project will be mapped, to the extent allowed by access.
- If an active raptor nest is found within 500 feet of the project, a determination will be made by a qualified biologist, in consultation with the CDFG, as to whether or not construction work will affect the active nest or disrupt reproductive behavior.
- If it is determined that construction will not affect an active nest or disrupt breeding behavior, construction can proceed, provided the noise restrictions of no more than 80 decibels between February 15 and June 15 is met, as described in avoidance measure CHANGE-4.
- If it is determined that construction will affect an active raptor nest or disrupt reproductive behavior, then avoidance is the only mitigation available. Construction will be delayed within 300 feet of such a nest until a qualified biologist determines that the subject raptors are not nesting or until any juvenile raptors are no longer using the nest as their primary day and night roost.

#### *Nesting Passerine Birds*

In order to avoid disturbance of the nests of special-status passerine bird species, which are protected under CA Fish and Game Code 3503, the following measures shall be adhered to:

**BIRD-7:** No more than two weeks prior to construction, a qualified wildlife biologist will conduct preconstruction surveys of all potential nesting habitat within 500 feet of construction activities where access is available. These surveys shall be shared with the Conservation Groups. If construction activities (i.e., ground clearing and grading, including removal of trees or shrubs) are scheduled to occur during the non-breeding season (September 1 through January 31), no measures are required. If construction activities are scheduled to occur during the breeding season (February 1 through August 31), the project proponent will implement the following measures to avoid potential adverse effects on special-status birds:

- If active nests are found during preconstruction surveys, the project proponent will create a no-disturbance buffer (acceptable in size to the CDFG) around nests of special-status birds during the breeding season, or until it is determined that all young have fledged. Typical buffers are 250 feet for passerine nesting birds. The size of these buffer zones and types of construction activities restricted in these areas may be further modified in coordination with the CDFG and will be based on existing noise and human disturbance levels at the project site. Nests initiated during construction are presumed to be unaffected, and no buffer would be necessary. However, the “take” (mortality, severe disturbance to, etc.) of any individual birds will be prohibited.
- If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further mitigation is required. Trees and shrubs within the construction footprint that have been determined to be unoccupied by special-status birds or that are located outside the no-disturbance buffer for active nests may be removed.

## **Mammals**

In an effort to avoid direct impacts to special-status mammals, including the Berkeley kangaroo rat (FSC/--), San Joaquin kit fox (FE/CT), special-status bats, American badger (--/CSC), and San Francisco dusky-footed woodrat (--/CSC), the following avoidance measures shall be adhered to:

### *Berkeley Kangaroo Rat*

**MAM-1:** A qualified biologist will conduct pre-construction trapping surveys within a sufficient period so as to maintain the relevancy and utility of the surveys for the Berkeley kangaroo rat, in potential habitat for this species. These surveys shall be shared with the Conservation Groups.

- ODS will hire a qualified consultant to use DNA testing to verify the sub-species of any detected kangaroo rats onsite.
- If the presence of the Berkeley kangaroo rat is verified, all occupied habitat outside of the direct mining footprint will be avoided, and consultation with the USFWS and CDFG will be initiated before construction or activity within the mining footprint can begin.



### *San Joaquin Kit Fox*

**MAM-2:** If jurisdictional wetlands will be impacted during the construction or operational phase of SMP-17, then ODS shall initiate informal consultation with the USFWS to determine the need for formal consultation and preparation of a Biological Assessment and Biological Opinion for the San Joaquin kit fox, unless an HCP has been signed with the USFWS that covers the kit fox

**MAM-3:** Prior to and within a sufficient period so as to maintain the relevancy and utility of the surveys the commencement of construction activities, a qualified biologist will conduct a walking transect (as described in the USFWS 1999 kit fox survey protocol, U.S. Fish and Wildlife Service San Joaquin Kit Fox Survey Protocol for the Northern Range) to evaluate prey base and detect any potential kit fox dens within the project area, and will photograph, mark, and map any kit fox dens and potential kit fox dens. The results of this transect will be shared with the Conservation Groups. ODS will provide this information, along with the 8 early evaluation requirements described in the USFWS 1999 kit fox survey protocol, to the USFWS to determine if more complete kit fox surveys will be required. If more complete surveys are required, these surveys shall be shared with the Conservation Groups.

Disturbance of all known San Joaquin kit fox dens outside the mining footprint will be avoided to the greatest extent possible. If a known den is documented within the mining footprint, consultation with the USFWS and CDFG will be initiated before construction or activity within the mining footprint can begin. Limited destruction of potential dens within the mining footprint may be allowed, provided the following procedures are implemented:

- Potential dens occurring within the mining area will be monitored for seven days with tracking medium or an infrared beam camera to determine current usage. If no kit fox activity is observed during this period, the den would be destroyed immediately to preclude subsequent use. If kit fox activity is observed, the den will be considered a known den and ODS must consult with the USFWS and CDFG on how to proceed.

**MAM-4:** Project-related vehicles will observe a 20-mph speed limit in kit fox habitat areas except as posted on county roads and state and federal highways. Off-road traffic outside the designated Project Area will be prohibited.

**MAM-5:** To prevent accidental entrapment of kit fox or other animals during construction, all excavated or deep-walled holes or trenches greater than two feet will be covered at the end of each workday by plywood or similar materials, or provided with escape routes constructed of earth fill or wooden planks. Before such holes are filled they will be thoroughly inspected for trapped animals. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipe and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of four inches or greater that are stored at construction sites for one or more overnight periods will be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way.

### *Special-Status Bats*

ODS will take the following measures to avoid direct mortality of roosting special-status bats and disturbance of maternity roosts or winter hibernacula:

**MAM-6:** A qualified bat biologist, acceptable to the CDFG, shall conduct surveys of all potential bat habitat within 500 feet of construction or reclamation activities or post-reclamation activities prior to initiation of such activities. Potentially suitable habitat shall be located visually. Bat emergence counts shall be made at dusk as the bats depart from any suitable habitat. In addition, an acoustic detector shall be used to determine any areas of bat activity. At least four nighttime emergence counts shall be undertaken on nights that are warm enough for bats to be active. The bat biologist shall determine the type of each active roost (i.e., maternity, winter hibernaculum, day or night). These surveys shall be shared with the Conservation Groups.

**MAM-7:** Removal of trees or demolition of buildings showing evidence of bat activity will occur during the period least likely to impact the bats as determined by a qualified bat biologist (generally between February 15 and October 15 for winter hibernacula, and between August 15 and April 15 for maternity roosts). If active day or night roosts are found the bat biologist shall take actions to make such roosts unsuitable habitat prior to tree removal or building demolition. ODS shall inform the Conservation Groups within 10 days of any action taken under this provision.

**MAM-8:** A no-disturbance buffer shall be created around active bat roosts being used for maternity or hibernation purposes at a distance to be determined in consultation with the CDFG. Bat roosts initiated during construction are presumed to be unaffected, and no buffer is necessary.

**MAM-9:** If preconstruction surveys indicate that roosts are inactive or potential habitat is unoccupied during the reclamation or construction period, no further mitigation is required. Trees and buildings that have been determined to be unoccupied by special-status bats and that are located outside the no-disturbance buffer for active roosts may be removed or demolished. If known bat roosting habitat is destroyed during tree removal or building demolition activities, artificial bat roosts shall be constructed in an undisturbed area of the property, at least 200 feet from any ongoing or future activities. The design and location of the artificial bat roost(s) shall be determined by a qualified bat biologist.

#### *American Badger*

**MAM-10:** A qualified biologist shall conduct focused preconstruction surveys within a sufficient period so as to maintain the relevancy and utility of the surveys for potential American badger dens within the work area no more than two weeks prior to construction. These surveys shall be shared with the Conservation Groups. If no potential American badger dens are present, no further mitigation is required. If potential dens are observed and the qualified biologist determines that the dens are inactive, the biologist shall excavate these dens by hand with a shovel to prevent badgers from re-using them during construction. If potential dens are observed and the qualified biologist determines that the dens may be active, the entrances of the dens shall be blocked with soil, sticks, and debris for three to five

days to discourage use of these dens prior to project disturbance. The den entrances shall be blocked to an incrementally greater degree over the three- to five-day period. After the qualified biologist determines that badgers have stopped using active dens within the project boundary, the dens shall be hand-excavated with a shovel to prevent re-use during construction. ODS shall inform the Conservation Groups within 10 days of any determination made under this provision.

#### *San Francisco Dusky-Footed Woodrat*

**MAM-11:** Not more than two weeks prior to construction, a qualified wildlife biologist will conduct a preconstruction survey to identify woodrat nests within 10 feet of proposed ground disturbance. A qualified wildlife biologist will conduct additional surveys periodically throughout the duration of construction activities to identify newly constructed woodrat nests. These surveys shall be shared with the Conservation Groups. If woodrat nests can be avoided by project activities, the qualified biologist would demarcate suitable buffer areas for avoidance with orange construction fencing around nests. If woodrat nests are located within areas proposed for construction, nest relocation would be implemented. Active woodrat nests found within 10 feet of proposed disturbance areas would be relocated to adjacent suitable habitat under the supervision of a qualified wildlife biologist. Understory vegetation would first be cleared from around the nest. Next, the biologist would disturb the nest and allow woodrats to leave the nest. Finally, the biologist would remove the nest sticks and pile them offsite within suitable habitat. Stick piles would be placed at least 100 feet from each other or at another suitable distance determined by the biologist. ODS shall inform the Conservation Groups within 10 days of any determination made under this provision.

#### **Special-Status Plants**

In an effort to avoid direct impacts to special-status plants in the Project Area, the following avoidance measures shall be adhered to:

**PLANT-1:** As detailed in measure SURVEY-3, ODS will hire a qualified consultant to complete more detailed vegetation mapping of the Project Area prior to the CEQA process for Revised SMP-17, in order to inform the project planning process within a sufficient period so as to maintain the relevancy and utility of the maps. This vegetation mapping shall be shared with the Conservation Groups.

**PLANT-2:** As detailed in measure SURVEY-5, ODS will hire a qualified botanist to conduct initial presence/absence surveys for special-status plants prior to ground-breaking activities. Initial surveys will be carried out in conjunction with surveys for endangered butterfly host plants as described in avoidance measure INV-2. These plant surveys shall be carried out at least 6 years prior to commencement of any ground-disturbance at Apperson Ridge and within a sufficient period so as to maintain the relevancy and utility of the surveys, in order to inform future planning efforts and to provide a basis for timely completion of the mitigation measures stipulated in measure PLANT-3, below, in the event that special-status plants are found. These surveys shall be shared with the Conservation Groups.

- Surveys will be conducted in accordance with CNPS, CDFG and USFWS rare plant survey guidelines and will be conducted during the flowering period when each species is most readily identifiable.
- Whether or not special-status plant species are found during the initial surveys, subsequent surveys shall be carried out at least 5 years prior to commencement of any ground disturbance on Apperson Ridge, in order to (1) confirm that no special-status plants species are present, or (2) to document changes in known population distribution, if any. These surveys shall be shared with the Conservation Groups.
- Pre-construction surveys shall also be carried out within the year prior to ground disturbance. These surveys shall be shared with the Conservation Groups. Any new plant populations found at this time shall be mapped and salvaged to the extent feasible prior to the start of construction.
- Any special-status plant populations shall be mapped in the field for later use in project planning efforts.
- If the presence of any special-status plant species is confirmed, a copy of the survey results will be forwarded to CDFG, and avoidance measure PLANT-3 will be implemented.
- In the event that special-status plants are proven absent, then no additional mitigation is necessary.

**PLANT-3:** In the event that special-status plant populations (federally or state listed plants or those on the CNPS List 1.B (rare, threatened, or endangered in California, and elsewhere), CNPS List 2 (rare, threatened, or endangered in California, but more common elsewhere), or CNPS List 3.1 (more information needed; seriously endangered in California) as well as those currently listed as Unusual and Significant in Alameda County) are found during surveys, then the following measures will be adhered to. ODS shall inform the Conservation Groups within 10 days of any determination made under this provision.

- For plants outside the mining area, the project proponent, in coordination with a qualified biologist, will avoid disturbance to the species by establishing a visible buffer zone of not less than 25 feet prior to any activities with the potential to disturb or result in mortality of special-status plant populations.
- If it is not feasible to avoid disturbance or mortality, such as within the mining footprint, then special-status plant populations will be restored on-site, either through direct techniques or through habitat enhancement measures (such as control of invasive species or limiting grazing) at a 1:1 ratio in areas that are to be protected as compensation lands. If feasible, special-status plants and/or seeds will be salvaged from areas of disturbance.
- Restored or enhanced populations will be considered experimental and will be established and monitored to ensure that the mitigation will be successful.
- A five-year restoration mitigation and monitoring program will be developed in conjunction with the CDFG and CNPS and implemented. Appropriate performance standards will include, but are not limited to: a 50 percent survival rate of restoration plantings or plant cover; absence of invasive plant species; and a functioning, self-sustaining plant community at the end of five years.

**PLANT-4:** For any special-status plant species that are found within the mining footprint or footprint of infrastructure that cannot be relocated, ODS will conduct plant salvage at least two (2) years prior to groundbreaking. Any plants salvaged shall be provided free of charge to the CNPS and native plant nurseries, to salvage materials that would otherwise be destroyed. Salvaged plants will be propagated for mitigation use on site, at a 3:1 ratio of healthy plants propagated to plants removed.

**PLANT-5:** Plant materials propagated for mitigation purposes should be collected on site. If adequate plant material for propagation is not available on site, plants from within the watershed should be used. Seeds will be the preferred method for propagation, and if cuttings are used they shall represent maximum possible genetic diversity. The use of locally adapted materials will maximize fitness of planting stock and preserve the genetic integrity of local plant populations, which is especially important for species nearing local extirpation. The procurement of suitable planting stock should not jeopardize existing populations of rare taxa.

- When insufficient materials for collection exist on site, then a collection radius of 10 miles should be adhered to whenever possible.
- Prior to the use of non-local stock, the potential for damaging the genetic structure of local plants species should be assessed.
- Whenever possible, plant materials for a specific site should be collected from similar sites with respect to elevation, position on slope, aspect, and substrate. This practice ensures the highest degree of local adaptation and, theoretically, consequent survivorship.

**APPENDIX D**

**PROJECT LOCATION MAPS**

**APPENDIX E**

**WRA 2004 - DELINEATION OF POTENTIAL JURISDICTIONAL WETLANDS**

## **APPENDIX F**

### **WRA 2003 – ALAMEDA COUNTY APPERSON RIDGE QUARRY MITIGATIONS**

Tule Elk Mitigation Program (Condition of Approval No. 45)

California Red-Legged Frog Avoidance Program (Condition of Approval No. 50)

Habitat Enhancement Plan (Condition of Approval No. 26/47)

Woodland Replacement Plan (Condition of Approval No. 44)



**APPENDIX G**

**VEGETATION MAP**