PILARCITOS QUARRY EXPANSION

Final Environmental Impact Report

Prepared for
County of San Mateo

December 2011

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Final Environmental Impact Report

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CHAPTER I
Introduction

A. CEQA Process

On May 11, 2011, the County of San Mateo (the Lead Agency) released for public review a Draft Environmental Impact Report (Draft EIR or DEIR) on the proposed Pilarcitos Quarry Expansion Project (Project). A 45-day public review and comment period on the Draft EIR began on May 11, 2011, and closed on June 24, 2011. The County also held a public hearing to receive oral public comment on the Draft EIR at the San Mateo County Planning Commission meeting on June 8, 2011, at the Board of Supervisors Chambers in Redwood City.

The Draft EIR for the proposed Pilarcitos Quarry Expansion Project, together with this Document, constitute the Final EIR for the proposed Project. The Final EIR is an informational document prepared by the Lead Agency that must be considered by decision-makers before approving the proposed Project (CEQA *Guidelines*, Section 15090). California Environmental Quality Act (CEQA) *Guidelines* (Section 15132) specify the following:

> "The Final EIR shall consist of:
>
> (a) The Draft EIR or a revision of that draft.
>
> (b) Comments and recommendations received on the Draft EIR either verbatim or in a summary.
>
> (c) A list of persons, organizations, and public agencies commenting on the Draft EIR.
>
> (d) The responses of the Lead Agency to significant environmental points raised in review and consultation process.
>
> (e) Any other information added by the Lead Agency."

This document has been prepared pursuant to CEQA and in conformance with the CEQA *Guidelines*. This document incorporates comments from public agencies and the general public, and contains appropriate responses by the Lead Agency to those comments. It also provides relevant new information that has come to light since publication of the Draft EIR, and revisions to the Draft EIR prompted by comments and by new information.

B. Method of Organization

This Final EIR for the proposed Pilarcitos Quarry Expansion Project contains revisions to and completes the Draft EIR published in May, 2011. The document is organized as follows:

Chapter I describes the CEQA process and the organization of this Final EIR.

Chapter II contains new information that has come to light since publication of the Draft EIR.

Chapter III contains a list of all persons and organizations that submitted written comments and those who provided oral comments at the Planning Commission Public Hearing on the Draft EIR during the public review period.

Chapter IV contains copies of the comment letters and public hearing minutes, and the responses to those comments. Within each letter and public hearing minutes, individual comments are labeled with a number in the margin. Immediately following the comment letter are responses to each of the numbered comments.

Chapter V contains revisions to the text of the Draft EIR. Some changes were made by the County; others were made in response to comments received on the Draft EIR.

Chapter VI contains the Mitigation Monitoring and Reporting Program, which identifies the responsible parties and lays out the timeline for implementation, monitoring, and reporting of the mitigation measures specified in the EIR.

CHAPTER II
New Information

This Chapter provides new information regarding the Pilarcitos Quarry that has come to light since publication of the Draft EIR.

A. Area H Expansion

The environmental review of a previous version of the Pilarcitos Quarry Expansion Project commenced in 2005. At that time, West Coast Aggregates (the applicant) was seeking approval of a long-term master plan for future mining and reclamation of the Pilarcitos Quarry, under which approximately 256 acres of the 593-acre property (consisting of Expansion Areas A through J) would be disturbed. Since the quarry was reaching the limits of the area that could be mined under its then-current Mining and Reclamation Plan, however, the applicant simultaneously sought approval of the initial expansion area (Area H) encompassing 7.36 acres (see Figure III-5 in Chapter III, Project Description, in the Draft EIR), to enable the quarry to continue mining pending completion of the environmental review and consideration of approval of the larger Project.

Environmental effects of the Area H expansion were analyzed in an Initial Study, prepared by County staff pursuant to CEQA *Guidelines* §15063, and completed in 2006. As the Initial Study identified no significant adverse environmental impacts for the Area H expansion project that could not be mitigated, and the applicant agreed to all identified mitigation measures, County staff recommended adoption of a Mitigated Negative Declaration, pursuant to CEQA *Guidelines* §15070. This recommendation was considered by the San Mateo County Planning Commission on May 10, 2006, but continued.

In July, 2007, the County circulated a revised Initial Study and Draft Mitigated Negative Declaration that addressed issues raised in consultation and correspondence with the State Office of Mine Reclamation, the California Coastal Commission, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game. The Mitigated Negative Declaration was adopted and the Area H expansion was approved by the Planning Commission following a public hearing at their September 26, 2007 meeting. A private party then appealed the approval to the Board of Supervisors, who, at their December 18, 2007 meeting, denied the appeal and upheld the Planning Commission approval. Following the denial, the approval of the Area H expansion was appealed to the California Coastal Commission.

In August, 2009, while the appeal of the Area H expansion was pending before the Coastal Commission, the applicant submitted a revised Mining and Reclamation Plan ("Pilarcitos Quarry

Master Expansion and Water Resource Project Mining and Reclamation Plan"), which covered mining on approximately 117 acres within the quarry property, including Expansion Areas H and J, a combined A+B area, associated reclamation, development of a large water storage feature within Areas A+B, and placement of a conservation easement over an additional 210 acres within the property. The County then re-initiated the preparation of a Draft EIR covering all proposed future mining, reclamation and other activities proposed under the August, 2009 Mining and Reclamation Plan. That Draft EIR was published in May, 2011, and is the document that this Final EIR revises and completes.

During the time that the Draft EIR was in preparation, the applicant continued to consult with USFWS and CDFG regarding potential mitigation for the adverse biological effects of their ongoing mining operations, as well as the proposed initial Area H expansion. In January, 2011, the applicant informed the County Planning Department that they had rejected the County's previous approval of the Area H expansion (the Coastal Commission had not yet considered the appeal of the prior County approval). At the same time, the applicant submitted a revised Mining and Reclamation Plan for Area H (see Appendix C in this document), that includes a proposed 192.5-acre conservation easement and incorporates several measures required by a U.S. Fish and Wildlife Service Biological Opinion (BO) issued in October, 2010 (see Appendix B in this document). The revised Mining and Reclamation Plan for Area H also specifies final reclamation standards for re-contoured and revegetated mined slopes that are consistent with those presented in Chapter III, Project Description, in the Draft EIR. (See further discussion under Conditions of the Area H Approval, below.)

The County determined that the proposed changes to the Area H Mining and Reclamation Plan did not substantially alter the basic intent of the previously approved reclamation plan amendment for Area H, but that changes to the final reclamation standards were substantial enough to warrant the issuance of a new approval with new conditions. The County Planning Director made findings of compliance with CEQA based on the previously adopted Mitigated Negative Declaration, and approved the Area H expansion. This approval occurred while the Draft EIR for the larger quarry project was going to press, and so information regarding the approval was not included in that document. This approval of the Area H expansion was not appealed and the appeal period has ended. The Area H Mining and Reclamation Plan, with the County's Conditions of Approval, is now the SMARA Amended Reclamation Plan in effect for the Pilarcitos Quarry. Mining of Area H is expected to occur over a one to one and a half year period, after which the applicant will commence reclamation of Area H.

Conditions of the Area H Approval

The County imposed several new conditions on the Area H expansion approval, many of which were derived from the USFWS Biological Opinion. Most, but not all, of the conditions of the previous Mining and Reclamation Plan approval in 2003 (which are listed in the Draft EIR Project Description) were carried over and updated in the Area H Conditions of Approval. The complete Conditions of Approval for the Area H expansion are included in the County's Revised Letter of Decision, which is included as Appendix A of this document. Several of the new

Conditions overlap with, or substantially implement, mitigation measures identified in this EIR. The following summarizes the Conditions, and provides an explanation of how they relate to the impacts and mitigation measures identified in the Draft EIR.

Condition 1 states that the revised Area H Mining and Reclamation Plan supersedes and replaces previously-approved plans.

Condition 2 requires the applicant to prepare, submit to the County for approval, and implement a site-specific erosion control plan that prevents sediment from entering into the adjacent Environmentally Sensitive Habitat Areas, in compliance with the County's Stormwater Control Best Management Practices and Regional Water Quality Control Board guidelines for erosion control. The approved erosion control plan must be maintained throughout the life of mining operations at this location.

This condition complements but does not replace nor implement Mitigation Measures C.1a, b, c, d, and e in Section IV.C, Hydrology and Water Quality, in the Draft EIR.

Condition 3 requires biological monitoring of vegetation clearing activities in Area H to identify any western leatherwood growing in the area. If detected, areas with western leatherwood would be avoided, or the plants would be transplanted to an appropriate area of the quarry property.

This condition is similar to Mitigation Measure D.1 in Section IV.D, Biological Resources, in the Draft EIR, and substantially implements that measure for the Area H expansion. Mitigation Measure D.1 would still apply to the rest of the proposed quarry expansion.

Condition 4 requires the applicant, prior to the beginning of mining operations in Area H, to record a conservation easement covering 192.5 acres in the northern portion of the quarry property. The area of the conservation easement is shown in Figure III-19 in Chapter 5, Revisions to the Draft EIR. This condition further requires the applicant to develop a plan for management of the easement lands, and to provide an endowment in an amount approved by the USFWS to cover the maintenance, monitoring, and security of the conservation easement area in perpetuity. The conservation easement was recorded in June, 2011.

This condition is intended as mitigation for the take of federally-listed threatened and endangered species within the current quarry operations area and within Area H. The conservation easement area overlaps substantially with the proposed 210-acre conservation easement area described as part of the Project in the Draft EIR Project Description, and the applicant has now modified the proposal for the larger expansion Project to remove references to the 210-acre conservation easement. To mitigate for additional take in mining areas J and A+ B, as identified in Section IV.D, Biological Resources, in the Draft EIR, the applicant is now proposing to add land to the existing 192.5 acre conservation easement, to amend the plan for management of easement areas, and to add to the endowment for the easement areas, prior to each mining phase. Based on the applicant’s discussions with USFWS, approximately three additional acres of undisturbed or reclaimed land would be added to the conservation easement for each acre of land disturbed. Since future mining outside of Area H would disturb an additional 107.4 acres (see revisions to

Chapter III, Project Description, in Chapter V, Revisions to the Draft EIR), the applicant would eventually add roughly 322 acres to the existing 192.5 acre conservation easement, for a total of approximately 514.5 acres, out of the total 588-acre ownership. The applicant assumes that, after the conclusion of site reclamation, the entire property will be placed in a conservation easement. The particular areas to be added to the conservation easement prior to each mining phase would be agreed upon through consultation with USFWS.

Conditions 5 and 6 require development of breeding ponds for California red-legged frog. According to Condition 5, within one year of the beginning of mining activities in Area H, the applicant must implement an enhancement plan for existing Pond A (located just outside of the northeast corner of the current mining area and adjacent to Area H) to provide perennial aquatic habitat for the California red-legged frog. Condition 6 requires that, prior to ground disturbance within Area H or Pond B (the existing large pond located just north of the processing plant), the applicant must develop a grading, revegetation, and water management plan for three additional habitat ponds to be created within the 192.5-acre conservation easement. This plan must be implemented prior to completion of mining activities within Area H.

Enhancement of the existing sediment pond in Area H and development of three additional ponds to provide breeding habitat for California red-legged frog are included as a part of Mitigation Measure D.2c in Section IV.D, Biological Resources of the Draft EIR. Mitigation Measure D.2c also requires development of additional breeding ponds and adjacent marsh habitat in Areas I and J as a part of reclamation of these mining areas. The number and location of the ponds would be determined through consultation with USFWS prior to reclamation of each mining area. Conditions 5 and 6 partially implement this mitigation measure.

Condition 7 requires the applicant, prior to ground disturbance within Area H or Pond B, to develop a long-term Management and Monitoring Plan for the entire Pilarcitos Quarry property that includes the following:

(1) a USFWS-approved quarry operations and water management plan that will minimize adverse effects of quarry operation to listed species including minimization and avoidance measures, monitoring for listed species in active quarry areas, and an annual reporting requirement;

(2) a USFWS-approved long-term management plan for habitat within the conservation easement including invasive species and predator management;

(3) a USFWS-approved 10-year monitoring plan for California red-legged frog and San Francisco garter snake in created, enhanced, and reclaimed habitat areas; and

(4) minimum success criteria for habitat reclamation, enhancement, and creation.

The Management and Monitoring Plan must be submitted to the County and the USFWS for review and approval prior to ground disturbance within Area H or Pond B. Provision (1) of the Long-Term Management and Monitoring Plan appears to overlap with Mitigation Measure C.4c in Section IV.C, Hydrology and Water Quality, in the Draft EIR. That Mitigation Measure,

however, is still required to mitigate Impact C.4 (Mining of proposed expansion areas could alter the local groundwater gradient).

Conditions 8-17 include operational restrictions to protect water quality and aquatic habitat, and to minimize and avoid take of special-status species.

Conditions 9-28 include measures to avoid and minimize take of California red-legged frog and San Francisco garter snake. Many of these conditions are similar to the requirements of Mitigation Measures D.2a, D.2b, and D.2e in Section IV.D, Biological Resources in the Draft EIR, and substantially implement these measures for the Area H expansion and ongoing operations within the existing processing area. Mitigation Measures D.2a, D.2b, and D.2e would still apply to the rest of the proposed quarry expansion.

Conditions 29 and 30 place restrictions on quarry operations for the protection of nesting raptors and migratory birds, respectively. These conditions are similar to Mitigation Measures D.5a and D.5b in Section IV.D, Biological Resources in the Draft EIR, and substantially implement these measures for the Area H expansion. Mitigation Measures D.5a and D.5b would still apply to the rest of the proposed quarry expansion.

Conditions 31-33 include requirements to minimize, avoid, and mitigate for the loss of the San Francisco dusky-footed woodrat. These conditions are similar to Mitigation Measures D.6b and D.6c in Section IV.D, Biological Resources, in the Draft EIR, and substantially implement these measures for the Area H expansion. Mitigation Measures D.6b and D.6c would still apply to the rest of the proposed quarry expansion.

Condition 34 requires reporting of the results of implementation of the biological resource measures contained in the foregoing conditions.

Condition 35 requires the applicant to submit current permits from other agencies to the County Planning and Building Department for recordkeeping purposes.

Conditions 36-55 carry over and update conditions of approval of the 2003 Surface Mining Permit and Amended Reclamation Plan, as listed in Chapter III, Project Description, of the Draft EIR. All conditions of the 2003 permit approval are carried over into the 2011 Area H Expansion approval, except for **Condition 12** (requiring that the storage pile area be surrounded by 4-foot berms on three sides to isolate contaminated runoff) and **Condition 16** (obligating the applicant to apply for all appropriate permits to construct acceleration/deceleration lanes for quarry trucks on Highway 92, in the event that CalTrans had not applied for a Coastal Development Permit to re-align portions of Highway 92 by a certain date.

B. Updated Information on Quarry Operations

The applicant provided comments on the Draft EIR (Comment Letter E in Chapter IV of this document) that contain updated information on current quarry operations. This is new information that updates the description of existing operations in Chapter III, Project Description,

of the Draft EIR. The new information provided pertains to water sources and water use, percentage of mined material that becomes saleable product, and other minor changes. None of this information substantially affects the impact analysis or significance conclusions reached in Chapters IV and V of the Draft EIR.

C. Recirculation Not Required

Under certain circumstances, new information that comes to light after publication of a Draft EIR and prior to certification of the Final EIR requires the lead agency to recirculate the Draft EIR (CEQA *Guidelines* §15088.5). The new information provided above does not trigger the need to recirculate the Draft EIR, as it does not result in the identification of new or more severe impacts, or new mitigation measures or alternatives that the applicant declines to implement (CEQA *Guidelines* §15088.5).

CHAPTER III
Agencies and Persons Commenting on the Draft EIR

A. Agencies and Persons Commenting in Writing

The following agencies, organizations and individuals submitted written comments on the Draft EIR during the public review period.

Letter	Person/Agency and Signatory	Date
A	State of California Governor's Office of Planning and Research, State Clearinghouse and Planning Unit (Scott Morgan, Director)	June 27, 2011
B	California Department of Transportation (Gary Arnold, District Branch Chief, Local Development – Intergovernmental Review)	June 27, 2011
C	State of California Department of Fish and Game, Bay Delta Region (Carl Wilcox, Regional Manager)	June 27, 2011
D	Midcoast Community Council (Len Erickson, Chair)	June 22, 2011
E	LSA Associates (Kevin Torell, AICP, Senior Planner)	June 24, 2011

B. Persons Commenting at the Public Hearing

A public hearing on the Draft EIR was held by the County on June 8, 2011. The following individuals provided spoken comments on the Draft EIR:

- Gail Slocum, Planning Commissioner, 4th District
- William Wong, Planning Commissioner, 1st District
- Frederick Hansson, Planning Commissioner, 2nd District

CHAPTER IV
Comments on the Draft EIR and Responses to Comments

This chapter contains copies of the comment letters received during the public review period on the Draft EIR, and the individual responses to those comments. Each written comment letter is designated with a letter (A through E) in the upper right-hand corner of the letter. Oral comments on the Draft EIR are also included in the Planning Commission Minutes.

Within each written comment letter, individual comments are labeled with a number in the margin. Immediately following each comment letter are the responses to each numbered comment. Where responses have resulted in changes to the Draft EIR, these changes also appear in Chapter V, Revisions to the Draft EIR.

Comment Letter A

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

RECEIVED
2011 JUN 29 P 4:13
SAN MATEO COUNTY
PLANNING AND BUILDING
DEPARTMENT

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

June 27, 2011

Michael Schaller
San Mateo County Planning Department
455 County Center, 2nd Floor
Redwood City, CA 94063

Subject: Pilarcitos Quarry Expansion
SCH#: 2006112102

Dear Michael Schaller:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. The review period closed on June 24, 2011, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. 1

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

Comment Letter A

SCH# 2006112102
Project Title Pilarcitos Quarry Expansion
Lead Agency San Mateo County

Type EIR Draft EIR

Description Pilarcitos Quarry is an ongoing mining operation that mines granitic rock for use as construction aggregate, including fill material, asphaltic concrete, landscape materials, and various grades of sand, drain rock, and road base. Quarrying and processing currently directly affect 53.31 acres in the southern portion of the 588-acre property. The Project includes approval of a proposing Mining and Reclamation Plan covering the reclamation of the current mining area, the mining and reclamation of the proposed mining expansion areas, and the development of several temporary and permanent water reservoirs within the mining pits. The proposed Mining and Reclamation Plan covers a time span of approximately 100 years, under which current mining operations would be expanded to include an additional 117 acres in the southern portion of the property. The Mining and Reclamation Plan includes specifications for reclaiming all disturbed areas after completion of mining, such that the land is returned to a condition suitable for intended future use as open space and water storage.

Lead Agency Contact

Name Michael Schaller
Agency San Mateo County Planning Department
Phone 650 363-1849 **Fax**
email
Address 455 County Center, 2nd Floor
City Redwood City **State** CA **Zip** 94063

Project Location

County San Mateo
City Half Moon Bay
Region
Lat / Long 37° 30' 0" N / 122° 23' 30" W
Cross Streets Highway 92
Parcel No. 048-340-080
Township 5S **Range** 5W **Section** 10,15 **Base** MDB&M

Proximity to:

Highways Hwy 92, 1
Airports
Railways
Waterways Nuff Creek, Pilarcitos Creek
Schools
Land Use General OS, Significant Mineral Resource Area, Resource Management-Coastal Zone/Coastal Development District (RM-CZ/CD)

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Coastal Zone; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Septic System; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife; Growth Inducing; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Conservation; Department of Fish and Game, Region 3; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Resources, Recycling and Recovery; California Highway Patrol; Caltrans, District 4; Regional Water Quality Control Board, Region 2; Department of Toxic Substances Control; Native American Heritage Commission; State Lands Commission

Note: Blanks in data fields result from insufficient information provided by lead agency.

Comment Letter A

Date Received 05/11/2011 ***Start of Review*** 05/11/2011 ***End of Review*** 06/24/2011

Note: Blanks in data fields result from insufficient information provided by lead agency.

Letter A. State of California Governor's Office of Planning and Research, State Clearinghouse and Planning Unit (Scott Morgon, Director)

A-1 The comment regarding compliance with the State Clearinghouse review requirements for draft environmental documents pursuant to the California Environmental Quality Act is acknowledged.

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY EDMUND G. BROWN JR., Governor

DEPARTMENT OF TRANSPORTATION
111 GRAND AVENUE
P. O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 286-5541
FAX (510) 286-5559
TTY 711

Flex your power!
Be energy efficient!

June 27, 2011

SM092122
SM-92-2.92
SCH#2006112102

Mr. Michael Schaller
San Mateo County Planning Department
455 County Center, 2nd Floor
Redwood City, CA 94063

Dear Mr. Schaller:

PILARCITOS QUARRY EXPANSION – DRAFT ENVIRONMENTAL IMPACT REPORT

Thank you for continuing to include the California Department of Transportation (Department) in the environmental review process for the Pilarcitos Quarry Expansion project. Altough the comment period ended on 6/24, the following comments are based on the Draft Environmental Impact Report (DEIR).

Highway Operations and Design

1. The document should clearly state whether or not there is an increase in traffic generated from the expansion of the quarry. Also, will there be an increase in truck trips, and if so, how many and at what times? 1
2. Please provide the queuing analysis on State Route (SR) 92 for peak hour operation of the quarry. 2
3. The Studied Intersection summary for SR 92/SR 35 need to state clearly whether the project will or will not have an impact on this intersection and why. 3
4. Please check and correct the Study Intersection numbering of SR 29/SR 35 on all Figures in relation to lane configuration, volume, trip distribution, etc. 4
5. A plan will need to be submitted in the event there are modifications to the project's driveway intersection with SR 92. 5

Encroachment Permit

Please be advised that any work or traffic control that encroaches onto the state ROW requires an encroachment permit that is issued by the Department. To apply, a completed encroachment permit application, environmental documentation, and five (5) sets of plans clearly indicating state ROW must be submitted to: Office of Permits, California DOT, District 4, P.O. Box 23660, Oakland, CA 94623-0660. Traffic-related mitigation measures should be incorporated into the construction plans during the encroachment permit process. See the website link below 6

for more information. http://www.dot.ca.gov/hq/traffops/developserv/permits/ 6 cont.

Please feel free to call or email Sandra Finegan at (510) 622-1644 or sandra_finegan@dot.ca.gov with any questions regarding this letter.

Sincerely,

GARY ARNOLD
District Branch Chief
Local Development – Intergovernmental Review

c: State Clearinghouse

bc: L Hall, G Arnold, S Finegan, Chron File

RECEIVED
2011 JUL -6 P 4:18
SAN MATEO COUNTY
PLANNING AND BUILDING
DEPARTMENT

Letter B. California Department of Transportation (Gary Arnold, District Branch Chief, Local Development – Intergovernmental Review)

B-1 The commenter indicates that the EIR should state whether there would be an increase in traffic generated from the Project, and how many and at what times any increase in truck trips would occur.

The commenter is referred to the discussion of Project trip generation on pages IV.E-14 to IV.E-15 in the Draft EIR. The Draft EIR explains that on any given day, the amount of peak hour and peak daily truck traffic generated by the quarry under the Project would not be greater than that which may occur presently. This is because under the proposed Project, the quarry would maintain the existing restriction on frequency of trucks that is set forth in the quarry's existing Surface Mining Permit. Specifically, Project truck headways on SR 92 may not be less than 2 minutes between 6:00 a.m. and 7:00 a.m., headways may not be less than 4 minutes between 7:00 a.m. and 9:00 a.m., and headways may not be less than 2 minutes after 9:00 a.m.

The Draft EIR acknowledges that, depending on market conditions, there are and will continue to be fluctuations in the daily and annual number of truck trips generated at the quarry. The quarry's production rates are based on the regional demand for aggregate products. As stated on page III-8 of the Draft EIR, the historical average rate of production (over the period 1993 through 2009) is 449,000 tons per year. The applicant estimates that, based on the quarry's maximum production capacity, up to 1,000,000 tons of aggregate could be produced and shipped in a year. Under this circumstance, a net increase of up to 27,550 annual round trips above baseline conditions could occur. However, as discussed above, since the peak frequency of truck trips would continue to be controlled by permit conditions under the Project, there would be no increase in peak hour or peak daily Project truck traffic.

B-2 The commenter requests a queuing analysis on SR 92 for peak-hour operation of the quarry. As discussed in the response to Comment B-1, above, under the Project, the quarry would maintain the existing restriction on frequency of trucks that is set forth in the quarry's existing Surface Mining Permit. Consequently, the volume of peak hour and peak daily truck traffic generated by the quarry under the Project would not be greater than that which may occur presently. This continued practice of metering trucks from the quarry under the Project would reduce the potential for Project truck queuing on SR 92. Consequently, no queuing analysis of SR 92 is required for this Project.

B-3 The commenter indicates that the EIR needs to state clearly whether the Project would have an impact on the intersection of SR 92/SR 35. Impact E.1 in Section IV.E, Transportation and Traffic, in the Draft EIR addresses potential effects at study intersections, including SR 92/SR 35. As explained in Impact E.1, and outlined in the

response to Comment B-1, above, there would be no Project-generated increase in peak-hour and daily traffic volumes on roads (or at intersections) in the Project area over existing permitted volumes. Therefore, the Project would have a less-than-significant effect on existing and cumulative traffic conditions at all study intersections in the Project vicinity, including at SR 92/SR 35.

B-4 The commenter requests correction of the study intersection numbering of SR 29/SR 35 on all figures in relation to lane configuration, volume, trip distribution, etc. (It is assumed the commenter is referring to SR 92, not SR 29 as was indicated in the comment). Corrected figures are included in Chapter V, Revisions to the Draft EIR, of this document showing the correct numbering of study intersections. Otherwise, the data shown for the study intersections involving SR 92 and SR 35 is accurate as presented in the Draft EIR.

B-5 The commenter indicates that a plan will need to be submitted in the event that there are modifications to the intersection of the quarry access road with SR 92. The comment is noted. As discussed in Impact E.4 in the Draft EIR, the Project applicant shall work with Caltrans to ensure that acceleration and deceleration lanes are installed along the Project access frontage. This would include the review and approval of such plans by Caltrans prior to installation. See also the response to Comment E-43.

B-6 The commenter indicates that any work or traffic control that encroaches onto the State right-of-way requires an encroachment permit issued by Caltrans. The comment is noted. As discussed in Impact E.4 in the EIR, the applicant is responsible for obtaining the appropriate encroachment permits to construct acceleration and deceleration lanes on SR 92 adjacent to the quarry access road. See also the response to Comment E-43.

State of California – The Natural Resources Agency
DEPARTMENT OF FISH AND GAME
Bay Delta Region
7329 Silverado Trail
Napa, CA 94558
(707) 944-5500
www.dfg.ca.gov

EDMUND G. BROWN, Jr. *Governor*
JOHN McCAMMAN, *Director*

June 27, 2011

Mr. Mike Schaller
San Mateo County
455 County Center, 2nd Floor
Redwood City, CA 94063

Dear Mr. Schaller:

Subject: Pilarcitos Quarry Expansion, Draft Environmental Impact Report, SCH #2006112102, San Mateo County

The Department of Fish and Game (DFG) has reviewed the draft Environmental Impact Report (EIR) for the Pilarcitos Quarry Expansion (Project). As a Trustee Agency pursuant to the California Environmental Quality Act (CEQA) Section 15386, DFG offers the following comments and recommendations regarding sensitive resources.

West Coast Aggregates, Inc (WCA) is proposing a Mining and Reclamation Plan to expand by 117 acres, the Pilarcitos Quarry mining areas, referred to as Area H, Area J and Area A+B, and develop several temporary and permanent reservoirs within the mining pits. The proposed Mining and Reclamation Plan covers a time span of approximately 100 years.

Project Description. Page II-1

The Project Description Summary includes the establishment of a conservation easement for the permanent preservation of approximately 210 acres on the northern portion of the property. DFG is aware of the Biological Opinion issued to WCA by the U.S. Fish and Wildlife Service (USFWS) in October 2010, for the expansion of Area H [*Biological Opinion on the Proposed Pilarcitos Quarry Operations and Area H Expansion (Corps File 400411S)*]. In the Biological Opinion, mitigation for the permanent impacts to California red-legged frog (CRLF) and San Francisco garter snake (SFGS) from the quarry operations and Area H expansion included establishment of a conservation easement of 192.5 acres and creation of three ponds in the easement area suitable for those species. The Biological Opinion requires these measures to provide mitigation specifically for the expansion of Area H. The EIR describes the conservation easement and pond creation as providing mitigation for all expansion areas. If the project will include preservation of the balance of 17.5 acres as mitigation for Area A+B and Area J, this should be clearly stated in the EIR. Additional measures will be necessary to mitigate for the permanent impacts to CRLF, SFGS, and wetland and riparian habitat removal from the operations in Area A+B, and Area J. DFG recommends that the EIR be recirculated for comment following incorporation of such mitigation measures. DFG may provide additional comments on the proposed Area A+B and Area J mitigation in response to a recirculated draft EIR.

1

2

3

History of the Project. Page III-6

This section of the EIR lacks information regarding the expansion, current use and past permitting procedures for Area H. The EIR should include this information to inform the public of interrelated projects and activities that may have occurred or will occur and how it relates to this Project. If work has occurred in Area H as stated in the Biological Opinion, this should be noted in the EIR. The EIR should describe how this changes the project description and analysis of the alternatives evaluated for comparison to the Preferred Alternative. 4

Phase 1, Mining and Excavation. Page III-18

The EIR states a haul road would be constructed to access Area J. It is unclear if the road will be constructed from Area H to Area J. Figure III-5, Mining Plan, does not indicate a haul road to Area J. Please note on Figure III-5 Mining Plan, where the haul road will be located. Most of the surrounding land around Area H is an Environmentally Sensitive Habitat Area (ESHA). The EIR should analyze the impacts to the resources from construction of and traffic on this haul road, especially if the road is constructed in an ESHA. 5

Phase 4. Page III-36 and IV.D-45

The EIR states the water storage feature will function during Phase 2 and 3 but will be relocated to the current mining area during Phase 4. This water storage is proposed as mitigation for decreased flows in Nuff and Pilarcitos creeks to provide pulse flows for steelhead smolt migration. Phase 4 is proposed to occur for 20 to 32 years. If there is no water feature to provide pulse flows, what mitigation is proposed for decreased flows during this long time period in Phase 4? 6

Figure IV.D-3, Wetland Features

The figure shows and the legend states, "Willow-Problem Area." There is no mention of what this is in the text and how it relates to wetland areas. Please provide an explanation of each legend label in the EIR. 7

Reptiles, San Francisco Garter Snake, Page IV.D-17

The EIR correctly states that SFGS are a fully protected species. However, under Section 5050 of the Fish and Game Code, DFG may authorize the take of Fully Protected species only for necessary scientific research, including efforts to recover fully protected, threatened or endangered species. Scientific research does not include actions taken as part of mitigation for a project. 8

CRLF Mitigation Measures D.2c. Page IV.D-42

As discussed above, the pond creation mitigation measure only applies to impacts related to Area H. The EIR should analyze impacts and state mitigation measures for quarry operations, reclamation activities and water storage operations for each expansion area. 9

In addition, mitigation measure {c} in this section is vague. Please provide additional information, including where the breeding ponds will be located, how they will be constructed, how many will be constructed, acreage or size of ponds, how far they will be from other breeding ponds, and how upland habitat will be maintained and preserved. Please also state 10

how much marsh habitat will be created and where will it be located. Following consideration of this information, DFG may provide additional comments in response to a recirculated draft EIR. 10 cont.

Reduced Mining Alternative

DFG recommends the Reduced Mining Alternative be adopted. This alternative would enable the continuation of mining at the site for many decades while avoiding sensitive habitat area and natural resources. 11

DFG appreciates the opportunity to provide comments on the EIR for the proposed Project and is available to meet with you to further discuss our concerns. If you have any questions, please contact Ms. Suzanne DeLeon, Environmental Scientist, at (831) 440-9433 or sdeleon@dfg.ca.gov; or Mr. Richard Fitzgerald, Coastal Habitat Conservation Supervisor, at (707) 944-5568.

Sincerely,

Carl Wilcox
Regional Manager
Bay Delta Region

cc: State Clearinghouse

Stephanie Jentsch
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
2800 Cottage Way, Room W-2605
Sacramento, CA 95825

Letter C. State of California Department of Fish and Game, Bay Delta Region (Carl Wilcox, Regional Manager)

C-1 Please see Chapter II, New Information, regarding the recently-established 192.5-acre conservation easement, and its relationship both to the now-approved Area H expansion and to the remainder of the proposed Project. The conservation easement area is shown in Figure III-19 in Chapter V, Revisions to the Draft EIR.

C-2 Please see Chapter II, New Information, regarding additional mitigation for the proposed expansion into areas A+B, and J.

C-3 New information is provided in Chapter II of this document to update the information provided in the Draft EIR with respect to the recent approval by San Mateo County of a portion of the Project analyzed in the Draft EIR: the Area H expansion. This new information does not trigger the need to recirculate the Draft EIR, as it does not result in the identification of new or more severe impacts, or new mitigation measures or alternatives that the applicant declines to implement (CEQA *Guidelines* §15088.5).

C-4 Please refer to Chapter II, New Information, for a description of the Area H expansion approval process, current status, and relationship to this EIR.

C-5 The proposed access road to Mining Area J is shown in Figures III-6 through III-10 in Chapter III, Project Description, of the Draft EIR: note that the road alignment is discernable in the contour lines. As shown in these figures, the proposed access road would traverse existing mined slopes and benches, and would avoid Environmentally Sensitive Habitat Areas (ESHAs). The effects of road construction and use are analyzed in the Draft EIR. See, for example, Impact C.1 in Section IV.C, Hydrology and Water Quality.

C-6 During Mining Phase III, the current mining pit area would be prepared to accept the water storage feature as soon as Mining Phase IV begins. Therefore, water storage would be available throughout Mining Phase IV and there would be no interruption in availability of water for pulse flows or other purposes.

C-7 In their mapping of site vegetation, the applicant gave the “problem area” designation to arroyo willow thickets where willows were present in what appear to be relatively “dry sites” that lack any signs or evidence of wetland hydrology or hydric soils, which would typically support willow stands. This designation was to assist in identification of these regulated wetlands. To help clarify this point, revisions have been made to the text of the Draft EIR; please refer to Chapter V of this document, and see the change referenced to this comment number.

The following language is added to the Arroyo Willow Thicket discussion on page IV.D-7 of the Draft EIR to help clarify the issue:

> Arroyo willow thickets are present throughout the study area. Arroyo willow occurs relatively sparingly along Nuff Creek, but it is the dominant tree along some tributaries, co-occurring with Douglas fir on north-facing slopes. Several large stands of willow are also present on the south and east facing slopes. Some of the thickets are associated with observed wetland hydrology and hydrophytic plants such as Chamisso's hedge nettle and stinging nettle. Other stands occur on drier slopes and are not associated with visible seeps or other wetland conditions. The understory in these stands consists of plants associated with upland vegetation, including bush monkey-flower and yerba Buena (*Satureja douglasii*). These drier site willow thickets were termed by LSA (2004) as "problem areas" with respect to determining their regulatory status under the Corps Section 404 regulatory program and under the Local Coastal Program.

In addition, the following information is added to the Sensitive Natural Communities discussion on Page IV.D-10, at the end of the third full paragraph, last sentence (note that changes have also been made to this paragraph in response to Comment E-34):

> Under the California Coastal Act and San Mateo County LCP, sensitive communities are referred to as environmentally sensitive habitat areas (ESHAs). There are approximately 151 acres of ~~wetland~~ ESHAs within the ~~proposed expansion area~~ quarry property, including perennial and intermittent creeks (Nuff Creek and its tributaries), riparian areas bordering these creeks, and wetlands (all of which are described above) and defined buffer areas. LSA biologists identified and mapped these ~~wetland~~ ESHAs ~~throughout the Project area~~ (**Figure IV.D-3**) (LSA, 2008). (LSA, 2008), including several arroyo willow thickets on drier slopes (labeled as Problems Areas on Figure IV.D-3) which lacked any evidence of wetland hydrology or soils and which were not included as wetlands by the Corps (see verified Corps jurisdictional map, Figure IV.D-2).

C-8 To clarify State law regarding Fully Protected species, page IV.D-17 of the Draft EIR is reworded as follows:

> **San Francisco garter snake (*Thamnophis sirtalis tetrataenia*).** The San Francisco garter snake (SFGS) is a federal and state Endangered species, and a California Fully Protected species under Section 5050 of the CDFG Code. A Fully Protected species may not be taken or possessed at any time, except ~~possibly for necessary scientific research.~~ as authorized by CDFG for necessary scientific research, including efforts to recover Fully Protected species.

C-9 The commenter is correct that, under the terms of the USFWS Biological Opinion for the Area H expansion and current quarry operations, and the conditions of the County's recent approval of the Area H expansion, the quarry is required to create four California

red-legged frog (CRLF) breeding ponds. Enhancement of the existing sediment pond in Area H and development of three additional ponds to provide breeding habitat for California red-legged frog are included as a part of Mitigation Measure D.2c in Section IV.D, Biological Resources of the Draft EIR. The conditions in the Biological Opinion and the Conditions of Approval partially implement Mitigation Measure D.2c. Mitigation Measure D.2c also requires development of additional breeding ponds and adjacent marsh habitat in Areas I and J as a part of reclamation of these mining areas. The number and location of the ponds would be determined through consultation with USFWS prior to reclamation of each mining area.

C-10 As noted in the response to Comment C-9, Mitigation Measure D.2c requires the applicant to create additional CRLF breeding ponds within the reclaimed mine pits in Areas I and J. The number and location of the additional ponds will be determined through consultation with USFWS prior to reclamation of each mining area. The general parameters of pond design are described in Mitigation Measure D.2c in the Draft EIR.

All habitat mitigation areas will be protected under the Conservation Easement and per conditions of an approved Habitat Conservation Plan. These measures are anticipated to be similar to the Resource Management Plan Requirements originally drafted for the 192.5-acre Conservation Easement Area.

C-11 The commenter's recommendation to adopt the Reduced Mining Area Alternative is noted.

Midcoast Community Council

An elected Municipal Advisory Council to the San Mateo County Board of Supervisors

Serving 12,000 coastal residents

Len Erickson Chair | **Bill Kehoe** Vice-Chair | **Neil Merrilees** Secretary | **David Vespremi** Treasurer

Bob Kline | **Deborah Lardie** | **Leonard Woren**

June 22, 2011

Supervisor Don Horsley
San Mateo County Board of Supervisors
400 County Center
Redwood City, CA 94063

Re: Pilarcitos Quarry DEIR Comments

Honorable Supervisor Horsley,
Michael Schaller, Senior Planner,

Due to the size of the Draft EIR for the subject project and the limited time and resources of the Midcoast Community Council, our submitted comments will address only section 3.7.2 -- Traffic. Traffic impacts negatively impact thousands of commuters who drive eastbound on SR 92 on weekday mornings.

Due to the DEIR's approach of using averages, the Draft EIR significantly understates multiple aspects of the traffic impacts on the morning commute.

DEIR statement: The loaded trucks have an average speed that is 30%-40% slower than passenger vehicles.

Analysis: Assuming that passenger vehicles are traveling at the posted speed limit of 45 MPH, this statement indicates that the average truck speed is 27-31 MPH. However, that is the _average_, meaning that many trucks are significantly slower. From actual experience, it is common to have trucks lumbering up the hill at 10 MPH or even 5 MPH, creating massive backups for eastbound commuter traffic. 1

DEIR statement: The long passing lane beginning east of the quarry driveway allows commuters to pass the slower moving eastbound trucks.

Analysis: The passing lane doesn't begin until 0.6 miles east of the quarry driveway (per DEIR). Since trucks must stop at the bottom of the quarry driveway before turning onto SR 92, they are starting out very slowly from the instant they are on SR 92. As they pick up speed from zero to 30 MPH, the average speed in that 0.6 mile stretch is much lower than 30 MPH. At an assumed average speed of 20 MPH for that 0.6 miles, it requires 90 seconds for the truck to reach the passing lane, with commuters stuck behind the rolling roadblocks the whole time. 2

In addition, even at the "long passing lane" section, trucks moving slightly less slow than the slowest trucks often occupy the left lane in order to pass the slowest moving trucks. This has the effect of holding up all traffic to a speed of 20-30 MPH. Also, not all commuters will pass at the speed limit, yet most of those slow commuters will not move to the right lane and get behind a 20 MPH truck, effectively limiting all traffic to the speed of the slowest commuter even if there are no trucks passing other trucks.

Because the passing lane ends 0.5 miles before the summit (per DEIR), all traffic ends up stuck behind the slow moving trucks anyway. By the time the trucks have reached this point, the slowest ones are often moving at only 5 MPH. At 5 MPH, it requires 6 minutes to travel 0.5 miles. That's a long time for a long line of commuters to be stuck behind a slow truck. Since the trucks do not then go barreling down the hill and there are no downhill passing lanes, commuters in the long backup has no opportunity to pass the trucks until SR 92 reaches the signal at Canada Road / I-280. Also it must be noted that if a slow truck must stop at the signal on SR 92 at lower SR 35, the truck again starts out very slowly from that signal because it's uphill immediately east of the signal.

2 cont.

The Midcoast Community Council recommends and requests that the following required mitigation measures be incorporated into the Final EIR:

1. The Applicant will formally request that San Mateo County petition Caltrans to post the full length of the eastbound uphill passing lane "Trucks Use Right Lane Only at all times", with the Applicant to pay any costs levied by Caltrans. 3

2. Applicant to install an automated signal system at the end of the quarry road to meter trucks onto SR 92 as follows: Signal green: A truck may turn onto SR 92. Once that single truck is past the sensor, the signal turns red for the required time -- 2 minutes or 4 minutes, depending on time of day. 4

3. If Applicant uses a "flag man", applicant must ensure that the flag man NEVER stops through traffic on SR 92 in order to let a truck leave the quarry driveway. 5

Sincerely,

s/Len Erickson
Chair, Midcoast Community Council

Cc: San Mateo County Supervisors

Letter D. Midcoast Community Council (Len Erickson, Chair)

D-1, D-2 The commenter indicates it is common for trucks to travel east on SR 92 at speeds that are considerably lower than the posted speed limit. The commenter also asserts that the trucks cause delays for passenger vehicles on eastbound SR92 on both the segments that contain a passing lane as well as segments that do not contain a passing lane.

The commenter references specific information presented in Section 3.7.2 of the applicant's *Pilarcitos Quarry Master Expansion and Water Resource Project Mining and Reclamation Plan* (August 2009), and erroneously attributes the information as being in the *Pilarcitos Quarry Expansion Draft EIR* (May, 2011). Consequently, these comments do not specifically address the adequacy of the Draft EIR.

Nevertheless, as indicated in the Draft EIR, the amount of peak hour and peak daily truck traffic generated by the quarry under the Project would not be greater than that which may occur presently. This is because under the proposed Project, the quarry would maintain the existing restriction on frequency of trucks that is set forth in the quarry's existing Surface Mining Permit. Consequently, there would be no Project-generated increase in peak-hour and daily traffic volumes and consequently no worsening of conditions on SR92 or other local roadways. As the Draft EIR concludes in Impacts E-1 and E-2 in Section IV.E, Transportation and Traffic, the Project would be expected to have only a less-than-significant impact on traffic conditions on SR92.

Secondly, it is important to understand that SR92 is a regional roadway and a State highway, and the vehicle trips generated by the quarry make up only a portion of the large truck traffic on SR92. This roadway is used by many trucks other than those associated with the quarry, including trucks to and from the Ox Mountain Landfill. Any potential peak-hour delays contributed by non-quarry trucks are not associated with the quarry and the proposed Project. The EIR finds in Impact E-2 that the Project's contribution to cumulative traffic conditions would be less than significant. Note, however, that Impact V.3, in Chapter V, Cumulative Effects and Other Required Topics of the Draft EIR, reaches a conclusion of a significant cumulative traffic impact, based on the potential for the Project to make a cumulatively considerable and significant contribution to traffic and traffic safety on State Route 92, because it could result in a substantial annual average (not peak day or peak hour) increase of truck traffic.

Finally, as discussed in the Draft EIR, a number of road improvements are planned on SR 92 in the Project vicinity to improve overall circulation and safety on SR92. Caltrans is planning shoulder widening and curve corrections on SR92. The Caltrans project would provide operational improvements to SR92 by straightening tight radius

horizontal curves, improving vertical sign distance, and widening to provide standard lane widths and shoulder widths. The Caltrans project is being coordinated with the San Mateo County Transportation Authority. As required under Mitigation Measure E.4b, the applicant would be responsible for working with Caltrans to ensure that acceleration and deceleration lanes for the quarry access road are constructed; see the responses to Comments B-5 and E-43.

D-3, 4, 5 The commenter recommends and requests that additional traffic-related mitigation measures be incorporated into the Final EIR.

As discussed in the response to Comments D-1 and D-2, above, the amount of peak hour and peak daily truck traffic generated by the quarry under the Project would not be greater than that which may occur presently. Consequently, the Project impact to traffic conditions on SR92 would be less than significant, and no mitigation is required. Furthermore, the quarry currently monitors trucks leaving the site to ensure compliance with the restrictions on the frequency of trucks leaving the site. The County has found this system to work adequately. Consequently, there is no need for installation and use of automated signals to meter trucks leaving the quarry. Finally, it is not the practice of the quarry to use a flag man to stop traffic on SR92 to allow a haul truck to leave the quarry access road, and such practice would also not occur under the Project.

35TH ANNIVERSARY 1976 LSA 2011

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SAN LUIS OBISPO

June 24, 2011

Michael Schaller
Project Planner
San Mateo County
Planning and Building Department
455 County Center, 2nd Floor
Redwood City, CA 94063

Re: Pilarcitos Quarry Expansion Project – DEIR Comments

Please find in this submittal West Coast Aggregates, Inc.'s comments on the Draft Environmental Impact Report (DEIR) for the Pilarcitos Quarry Expansion Project. As our comments are quite extensive, we would like to set up a meeting with the County and ESA as soon as possible to go through our comments to ensure understanding so that they can be appropriately addressed. You will also find in this submittal, as part of our comments, the Pilarcitos Quarry Environmental Benefits Report which counters many of the impacts that are included in the DEIR. If available, we would also like to be sent a copy of all other comments that have been submitted on this project.

Please let me know if you have any questions or concerns.

Thank you for your time,

Kevin Torell, AICP
Senior Planner

Submitted Via Email

cc: Richard DeAtley
Neil DeAtley
Bart Hetchman
Steve Foreman
Jim Eggemeyer
Dan Sicular
Paul Mitchell
Lennie Roberts
Kevin Lansing

Pilarcitos Quarry Expansion
Draft Environmental Impact Report

Project Applicant's Comments

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1) II-1, A. Project Description (4th paragraph and throughout document)

The Biological Opinion issued to the quarry by the US Fish and Wildlife Service (Attachment A) includes a mitigation measure that requires an 192.5 acre conservation easement to be developed on the rear portion of the property. That easement was recorded with the County on June 21, 2011. Therefore, the 210 acre conservation easement listed throughout the Mining and Reclamation Plan and Draft Environmental Impact Report needs to be revised. Since the 192.5 acres conservation easement will already be established by the time the new expansion areas will be disturbed, the applicant will mitigate any additional impacts to the property at a 3:1 mitigation ratio, adding additional acreage to the existing conservation easement. This mitigation ratio was developed in conjunction with US Fish and Wildlife Service and is consistent with current mitigation requirements. The Project intends to impact an additional 107.4 acres, and therefore will be adding approximately 322 acres to the conservation easement over the life of the quarry. The additional acreage will be added to the existing easement areas according to the acreage that is disturbed in each phase. 1

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2) III-1, A. Project Overview (1st paragraph and throughout document)

The DEIR contains several incorrect references to the quarry's distance from the City of Half Moon Bay. To clarify, we have measured the distance from the quarry to City of Half Moon Bay and to the coastline.

2.79 miles: Distance from Half Moon Bay City Limits to the center of Pilarcitos Quarry
3.17 miles: Distance from the coastline at its closest location to center of Pilarcitos Quarry
3.69 miles: Distance due east from the coastal line to center of Pilarcitos Quarry

Please revise all reference to distance to Half Moon Bay in the DEIR to be correct and consistent. 2

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3) III-5, Figure III-1 Regional Location and III-5 Figure III-2 Ownership Map

See Figure 2 and Figure 4 in the Mining and Reclamation Plan for the correct property and parcel information. The access road connecting Highway 92 to the quarry is part of the quarry property. The figures in the DEIR are outdated and from the original 2005 Mining and Reclamation Plan. 3

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4) III-8, E. Existing Operations, Level of Production

The average annual tonnage listed through the EIR is 449,000 tons. When we average the production numbers from 1993 to 2009 we get an average of 445,869 tons. Regardless, the 4

project applicant would like to call attention to the range in annual production numbers from 785,000 tons in 1998 to 142,000 tons in 1993 when West Coast Aggregates, Inc. first took ownership of the quarry. The production range (600,000 to 1 million tons) listed in the Mining and Reclamation Plan is a range of tonnage that the quarry is capable of producing and included in the Mining and Reclamation Plan to simply estimate the duration of each mining phase. This annual production range is heavily dependent on market demands, which is demonstrated in the fluctuating annual tonnage rates over the last few years. The applicant does not believe the annual tonnage rates should be limited, except by the timing regulations governing how frequently haul trucks can leave the site. 4 cont.

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5) III-9, Figure III-4, Existing Mine and Processing Area

This map is out of date. This map should be updated with Figure 3 submitted in the August 2009 Mining and Reclamation Plan. The layouts of the quarry and sediment ponds have changed significantly. 5

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6) III-12, Drainage and Sediment Control, 2nd paragraph

This paragraph references fencing. New requirements for fencing are listed in the Biological Opinion. The quarry operators will be following these new requirements for all new areas of expansion throughout the life of the quarry. For additional information see our comment on Mitigation Measure D-2e. 6

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7) III-12, Water Supply and Use, throughout section

There is currently one operating water well at the quarry. This well is located immediately south of the maintenance shop and used to supply water to the bathroom facilities, components of the processing plant and the residence to the south of the office building. The quarry's main water source comes from water stored during the rainy season in the retired mining pit. Quarry activities no longer occur in that mining pit and it is being used to store processing water that is continually pumped to and from the processing plant. 7

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8) III-14, Existing Permit Conditions

This information should be updated with the conditions of approval listed for the Area H expansion project that was approved by the San Mateo County Planning Director in March 2011. 8

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9) III-18, Table III-2 Anticipated Quantities of Materials

The project applicant would like to revise this table to remove the column that is titled "Recovered Material 90% of Total". They believe this calculation has accounted for in the Washed Fines (10%) column. Therefore the revised table can be found below: 9

Mining Area	Total Material Extracted (tons)	Overburden (tons)	Washed Fines (10%) (tons)	Net Saleable Aggregate (tons)
Area H	1,087,429	165,758	108,743	812,928
Area J	1,425,045	11,604	142,505	1,270,937
Area A & B	58,719,270	121,750	5,871,927	52,725,593
Reclamation Activities	1,092,353	0	109,235	983,118
TOTAL	**62,324,097**	**299,112**	**6,232,410**	**55,792,575**

9 cont.

10) III-21, Figure III-7, Mining Phase II through III-24, Figure III-10, Mining Phase V

Based on the Biological Opinion, the reclamation process for Area H has changed since the submittal of the August 2009 Mining and Reclamation Plan. US Fish and Wildlife determined that the recontoured reclamation concept proposed for the slopes and benches of Areas A and B would serve as better habitat, rather than the typical bench and slope reclamation standard. The Biological Opinion requires that the mined slopes and benches of Area H are recontoured during final reclamation and that a series of ponds are developed on the plateau of the expansion area. Therefore, we have decided to apply the same reclamation methods to Area J in anticipation of US Fish and Wildlife's comments. The figures listed above will need to be revised based on these new requirements for reclamation.

10

11) III-33, Test Plots (last statement of section)

The Test Plots described in the Mining and Reclamation Plan were implemented in the Fall of 2010. These test plots are testing 24 different reclamation methods and have been monitored monthly since installation. More information on the status and the conclusions already ascertained from the test plots is included in the Pilarcitos Quarry Environmental Benefits Report (Report).

11

12) III-35, Water Resource Storage System (last paragraph of section and throughout document)

Throughout the document, the DEIR mentions that the "Pilarcitos Creek Restoration Workgroup" will be making decisions on how the project's water storage components will be utilized to benefit the region. The Mining and Reclamation Plan never mentions that this group will make these types of decisions. It was the project applicant's concept that a special interest group made up of quarry staff, professional hydrologists, the local agricultural community, the watershed group, and the environmental community would make the ultimate decisions of how the available water would be used. Please remove all references of the PCRW from the DEIR.

12

13) III-39, Figure 11-19, Proposed Conservation Easement

This figure needs to be revised to reflect the existing 192.5 acre conservation easement and to show the remainder of the property that would be available to mitigate for the impacts under the Mining and Reclamation Plan. 13

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14) IV.B-4, Artificial Fills and Disturbed Soils

This section states that "derived… washed fines generated during the mining process and are used in the construction of berms, as road fill, and to create(d) level areas for process and storage facilities." Washed fines are not used to construct berms, or as road fill. The fines will be used to fill the mined pits that are created on the site. Washed fines are pumped into the pit where they are allowed to dry out, they are not used for any structural purposes. 14

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15) IV.B-23, Impact B.1

The discussion section of this impact states that the proposed mining plan would substantially steepen the existing topography. The mined slopes are prepared to be at 1:1 or 100% and reclaimed slopes are projected to be 1.25:1 or 80%. Illustrated on the attached map titled Slope Analysis, there are a significant amount of existing natural slopes that are 80% or greater. Therefore, the statement that mining would substantially steepen existing topography is not accurate. 15

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16) IV.B-31, Impact B.6

In a discussion with Cleary Associates (the applicant's Geotechnical Consultant) they stated that a wedge failure would not be large enough to create a seiche wave in the proposed water storage areas. They have stated that a deep seated rotational failure would need to occur in order to create such a wave as discussed in this impact. The material encountered at Pilarcitos would not lend itself to a deep seated rotational failure. Therefore, a landslide causing a seiche wave that would overtop a dam structure is not feasible. 16

The second paragraph of this impact discussion section mentions a number of dams, berms and structures that water could spill over if a landslide triggers a large wave in the water storage areas. The fact is, the Mining and Reclamation Plan includes only one earthen berm in Mining Phase IV that will be impounding water. There are no other berms or dams planned for construction as part of the project. The other proposed water storage areas are created in pits in the ground. The surrounding granite rock will be containing the water, no earthen structures will be needed. 17

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17) IV.B-33, Impact B.7

The third paragraph of the impact discussion section questions the structural integrity of the culvert system that underlies the quarry operation staging area. It states that the proposed expansion could potentially increase sediment feeding into the culvert. Since the mouth of the Nuff Creek culvert is upstream of any proposed disturbance, there is no possibility that an increased load of sediment would enter the culvert and impair its function. Pervious water quality 18

tests taken from Nuff Creek, both above and below the quarry, indicate that the culvert and/or the quarry has no impact on the water quality in the creek. 18 cont.

The stormwater outfall is positioned to release stormwater into Nuff Creek, although it has been years since there has been a discharge event because of the increased water storage capacity of the site. The Nuff Creek culvert and the sediment pond outfalls are two separate and independent systems. Considering the sediment pond system will be sufficient to contain or at least settle out any sediment in the stormwater, there will be no sediment reaching the outfall and flowing into Nuff Creek. 19

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18) IV.B-35, Mitigation Measure B.8 and Mitigation Measures G.4.a through G.4.f

We submitted the regulations on blasting listed in this section to the project applicant's blasting company for review. Below are their comments:

Charge-Weight-per-delay should not exceed 200 pounds.
According to the applicant's blasting company, 200 pounds would not be enough to fill even one hole at the quarry. This regulation is not able to be implemented. 20

All charges shall be stemmed with at least 8 feet of clean washed crushed stone.
The project applicant's blasting company had the following comment: "(The regulation) would limit burden to 7.5 feet most of the time… if you had small area to blast and you had to use smaller holes and patterns it would be a problem with the stemming if you had smaller patterns and holes. Its all just geometry, it has to make sense." 21

Blast-holes located within 500 feet of Ox Mountain Landfill cells shall be monitored for the presence of methane gas.
The project applicant's blasting company requires additional information about such monitoring before they provide comments on this regulation. They how long before the blasting event must they monitor for gas and ground vibration. They also have commented that this type of monitoring is typically done by a third party. 22

In general, the applicant's blasting company has stated that all blasting companies need to be permitted through the County. Therefore, any actions they partake in are held to a standard that is acceptable to the County and those standards should be applied to this project as well. 23

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19) IV.C-4, Seeps and Springs (last statement)

There is a statement in this section that notes that a seep observed in the southwest tributary is most likely hydraulically connected to the quarry pit. It is more likely that the seep in the existing mining pit is caused by the large operational/storm water sediment pond that is located directly above where water is seeping. Based on the movement of water to and from the pit from the pond (i.e. pond water level goes down, pit water level goes up) the quarry staff believes this pond-based scenario is more likely. 24

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20) IV.C-7, Figure IV.C-3

The "wetlands" identified in the legend for the figure include areas designated as wetlands on Figure IV.D-2 (Corps verified wetlands) and broader CCC defined riparian and wetland/hydrophytic vegetation categories shown on Figure IV.D-3. Given the regulatory and policy distinctions between wetlands and riparian habitats, the figure should be modified to conform to the information presented on Figure IV.D-3. 25

21) IV.C-11, Groundwater Quality (middle of 1st paragraph)

This section mentions that the ion balance in the groundwater beneath the ponds may be altered from the flocculent used to settle solids in the ponds. No flocculent is added directly to sediment ponds. The only flocculent used at the site is within the processing plant. Washed fines are mixed with flocculent and pumped to a separate process water pond. This pond is independent from the stormwater sediment pond system. Therefore it is not a possibility that groundwater can be altered beneath the stormwater sediment ponds. 26

22) IV.C-20, Impact C.1 Discussion Section (2nd full paragraph on page) and Mitigation Measure C.1d

The site currently maintains a General Permit for Industrial Stormwater and a General National Pollutant Discharge Elimination System permit (authorizing discharge for mining activities) from the Regional Water Quality Control Board. Under these permits the quarry operator is required to test any water discharges from the site into natural water bodies. There are certain thresholds the discharged water must meet (in regards to turbidity and chemical levels) in order for the quarry to remain in compliance with these permits. Any stormwater testing listed as a mitigation measure in the DEIR will be superseded by the quarry's testing requirements under existing permits. Therefore, the DEIR should defer to the requirements of those permits. 27

23) IV.C-21, Mitigation Measure C.1b

The first bullet under this mitigation measures speaks to the reclamation contours of Area H and J. As mentioned above, based on the Biological Opinion, Area H will feature a recontoured reclaimed slope. The plans will be revised to have the same reclamation treatment on the slopes of Area J. 28

24) IV.C-24, Mitigation Measure C.2c

This mitigation measures speaks to the conveyance area of Nuff Creek and Pilarcitos Creek and is very vague. There are no measurements or thresholds included in the mitigation measure that make it available to implement. Furthermore, Pilarcitos Quarry is not the only factor contributing to the flow of water around the Nuff Creek and Pilarcitos Creek conveyance. There are a number of agricultural fields in the area that would also contribute to the level of runoff. Additionally, the location of the conveyance is not located on the quarry property. There is nothing that the quarry operators can do to strengthen the conveyance area without the consent of the landowner(s) who own the property where the conveyance is located. The Mitigation Measure also requires an engineer to evaluate how much runoff will be generated by newly mined areas and that they 29

should design sediment ponds to capture that flow. Typically those calculations can be done by a variety of professionals and should not be limited to a civil engineer. 29 cont.

25) IV.C-27, Mitigation Measure C.4b

This mitigation measure states that, "Within 3 months of project approval, the applicant shall install two stream monitoring stations…". We believe this timing is inappropriate. Following any expansion project's approval, there could be a span of months, even years, while the quarry is completing permits and satisfying conditions of approval. It would be more appropriate for the time mechanism to be based on ground disturbance (i.e., three months prior to ground disturbance in mining Area B, the quarry operator will install two monitoring wells). This section also states that additional wells be developed between Nuff Creek and Mining Areas A and B. The quarry is physically very constrained; as you can see on aerial maps, there is not much space in between Nuff Creek and those expansion areas. It will also be difficult to find spaces to drill wells in that area considering the steep hillside and dense vegetation. We believe that monitoring the levels in the existing water supply well, located just south of the maintenance shop, would supply sufficient information regarding how the proposed mining pits will affect ground water levels. The timing requirement for this monitoring well should be based on when the excavation of the mining pit reaches a level that is determined to potentially affect ground water level. 30

26) IV.C-28, Mitigation Measure C.4c (last paragraph of section)

This section states, "…if the Periodic Hydraulic Report indicates that future mining will adversely affect baseflows, then the applicant shall cease mining…", but nowhere in the section does it list the parameters as to what "affecting baseflows" means. There should be a threshold to measure against in order to determine if the baseflows in Nuff Creek are being negatively affected based on the mining pits' groundwater gradient. 31

27) IV.C-31, Impact C.6

This impact discusses the possibility that the development of the mining pits could pull leachate from Ox Mountain Landfill through a fracture in the bedrock and that leachate from the landfill could contaminate the water storage areas. The impact also includes Mitigation Measure C.6ac, a) which would require the project applicant to install an additional monitoring well on the ridge between the Landfill's new ridge area and the proposed mining expansion. Drilling new exploratory wells in order to monitor an issue that is coming from an off-site use is not a proper condition on the project applicant nor is it their responsibly to fix a problem a neighboring landuse has caused. By our calculations the quarry's expansion areas are nearly one mile southeast of the Landfill's old clay-lined fill area. It seems unlikely that leachate would travel a mile through a fracture and into the proposed mining pits. Leachate is Ox Mountain Landfill's problem; they are responsible for controlling that substance. 32

28) IV. C-36, Impact C.7

The impact and associated mitigation measures concerning the existing water supply wells on site are outdated and unnecessary. Currently the site uses most of its water from the stormwater sediment ponds. Water from those ponds is pumped directly into the processing plant and the 33

water is then recycled. The water truck also fills up directly from the sediment pond to wet down dirt roads for dust control. The water supply at the quarry has substantially increased now that mining is no longer taking place in the existing mining pit. The mining pit has filled with water over the rainy seasons supplying enough water for the quarry to operate year round. The one water supply well on the site is used for the quarry bathroom facilities and for the small residence immediately south of the quarry. The water demand from these uses is not extensive enough to warrant a "groundwater level/groundwater metering program". The requirement to implement this program immediately following project approval is unnecessary as the production or operation of the quarry (need for water) does not immediately increase based on project approval. The timing mechanism should be tied to production rates reaching a certain level that would cause there to be a need for more water, if water was no longer available from the quarry's sediment ponds.

33 cont.

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29) IV.D-10, Sensitive Natural Communities (2nd paragraph of section)

This section states that there are 151 acres of wetlands ESHAs within the proposed project area which would be impossible considering the entire expansion is only 107.4 acres. This is a typo that needs to be corrected.

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30) IV. D-10, Sensitive Natural Communities (last paragraph of section)

The project applicant's biologists disagree with the stated assumption that all of the Pilarcitos Quarry property meets ESHA standards for these two species. As stated on Page IV.D-26, the Coastal Act defines ESHAs as "any area in which plant or animal life or their habitats are either especially rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and development (emphasis added).

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The Coastal Act thus establishes a high standard for protection of areas that are identified as environmentally sensitive and establishes a two part test for determining an ESHA. The first part is determining whether an area includes plants or animals or their habitats that are either: (a) rare; or (b) especially valuable because of their special nature or role in an ecosystem. If so, then the second part asks whether such plants, animals, or habitats could be easily disturbed or degraded by human activities. If so, then the area where such plants, animals, or habitats are located is deemed ESHA by Section 30107.5.

The following provides our comments on the EIR conclusions for the California red-legged frog and secondly, the San Francisco Bay Dusky-footed woodrat.

California Red-legged Frog

As discussed in the addendum to the biological resources report (LSA 2008), the best available studies on non-breeding habitat use and movement patterns of California red-legged frogs (in the coastal zone of central California) indicates that these amphibians occupy primarily mesic refugia when they migrate away from breeding areas (Fellers and Kleeman 2007). Dense clumps of blackberry, riparian woodland, and seeps are examples of mesic refugia that are present within the Quarry property. Frogs tend to move directly to such refugia when leaving breeding areas. Occasional frogs have been documented to make longer movements (up to 0.8 mile straight line

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or point to point migrations) overland, but the majority of frog movement appears to be relatively limited and largely confined to these mesic areas.

Based on our analysis of the relevant aspects of the natural history of this species and the distribution of suitable habitat within the Quarry property, LSA's 2008 analysis concluded that most frog movement within the Quarry property likely occurs within the delineated wetland and riparian area and their buffers. All mesic refugia identified within the study area are contained within riparian and wetland ESHAs and their buffers (see Figure IV.D-4 of the DEIR).

The US Fish and Wildlife Service (USFWS) identified three primary parameters or constituent habitat elements that are essential to the conservation of the California red-legged frog. These areas are 1) suitable aquatic habitats for breeding and hydration, 2) uplands surrounding suitable aquatic habitats that contribute to protecting water quality, and 3) dispersal areas between suitable aquatic habitats (Federal Register 71 (71): 19243-19346).

The "blue" ESHA areas on Figure IV.D-4 of the DEIR include the aquatic habitats for breeding and hydration (primary constituent element 1 above) and the primary mesic habitats that provide the primary movement corridors based on the information from Fellers and Kleeman (2007). Primary constituent element 2, uplands for protecting water quality, is provided by the wetland and riparian buffers. The riparian, wetland and other mesic habitat elements, particularly the drainages in the northern portion of the property which tend to be much wetter (see discussion in DEIR Hydrology, Impact C-3, page IV.C-25) meet both "rare" and "especially valuable" criteria and could be easily disturbed or degraded by human activities, thus meeting the two tests for being considered an ESHA.

36 cont.

As noted by Fellers and Kleeman (2007) and others, California red-legged frogs are known to make longer and more random movements outside of the riparian, wetland and other associated mesic habitats in other drier habitats (e.g., coastal scrub, non-native grassland, etc.). While we recognize this movement, LSA does not believe this broader movement which is typically limited to a few individuals in a population does not rise to ESHA standards. These movement corridors are likely to be occupied only during the relatively brief time individuals are moving between areas of suitable habitats (i.e., aquatic breeding areas and refugia) and many individuals are likely to perish during these movements if suitable habitat is not encountered.

LSA does not believe these other areas where is this broader movement could occur meet the ESHA tests. These habitats are not rare, essentially any non-developed habitat in the coastal zone in San Mateo County is potentially subject to use by dispersing red-legged frogs. While the dispersal or movement function provided by these other habitats is valuable to the species, the function or ability for movement in the project area is not easily disturbed or degraded by the proposed mining activity. The proposed mining would convert an area of scrub and grassland to an active quarry, but such a change would not preclude the function provided by the mine area.

California red-legged frogs currently breed in ponds within the currently active quarry and processing plant and move through the active quarry area between the ponds and riparian areas along Nuff Creek, indicating that the quarry activities (mining, material processing, sales, etc.) are not creating barriers to this broader movement.

Even some of these areas such as the channel areas within the Area A and B expansion may not serve a significant or especially valuable function for the frog. This side canyon to Nuff Creek does not contain any suitable breeding habitat nor serve as a corridor between any important breeding habitats (the Ox Canyon Landfill lies at the upslope edge of the quarry property). Thus,

the canyon does not meet the USFWS primary constituent element definition as a dispersal corridor. 36 cont.

San Francisco Bay Dusky-footed Woodrat

The population of dusky-footed woodrat on the San Francisco Peninsula and the East Bay hills is a distinctive subspecies (San Francisco dusky-footed woodrat) which is currently considered a species of special concern (Comrack et al., 2008) by the California Department of Fish and Game (CDFG). The species of special concern category is a CDFG administrative designation; it does not carry any legal status. The San Mateo County Local Coastal Plan (LCP) does not specifically address species of special concern, but considers habitats of "*rare, endangered, or "unique*" species as ESHAs.

We do not believe the San Francisco dusky-footed woodrat habitat merits ESHA status. This subspecies of woodrat was not included on the State's original mammals of special concern list (Williams, 1986) or in a draft (though incomplete) updated list and report from 1998. It seems to be on the California Natural Diversity Data Base list as a special concern species as a result of some broader assessment rankings that likely considered its limited range which is centered in an area of large scale urban development. To date, the San Francisco dusky-footed woodrat has not been subject to the rigorous methodology (outlined in Shuford and Grdali 2008) currently desired by the CDFG for designation as a species of special concern. While CDFG is currently in the process to select a contractor to update and revise its mammals of special concern list, it will likely be several years before any determination is completed.

Pilarcitos Quarry requested that LSA prepare a comprehensive evaluation of the conservation status of the San Francisco dusky-footed woodrat (copy attached). We based the assessment methodology on the criteria recently developed to evaluate bird species of special concern in California (Shuford and Gardali 2008[1]), which has also been adopted by the CDFG for assessing species of special concern for other species groups as well. 37

Application of the same ranking criteria and ranking schemes employed by Shuford and Gardali (2008) for the San Francisco dusky-footed woodrat suggests that while the subspecies has a relatively small currently accepted range, it is a relatively common to abundant and widespread within its range. The range trend, or loss of habitat, is also relatively limited. Our analysis suggests that 65% of the species, historic potential habitat or range (approximately 1.2 million acres) is still extant and occupied and that most of this habitat loss occurred prior to the 1940s. Since the 1940s, the reduction in woodrat habitat has been limited to only 2% to 3% of the species potential habitat, in spite of the rapid and massive urban growth in the San Francisco Bay Area during the last half of the 20th Century. Our future threats assessment indicates little reduction (2 to 3%) in habitat over the next 40 years.

Currently over 37% of the remaining habitat is in protected lands (state park, various regional parks, water district supply watershed lands, etc.). Additional lands are projected to be acquired by ongoing habitat preservation programs such as the East Contra Costa County HCP/NCCP and Santa Clara Valley HCP/NCCP, which, once implemented, would increase protected habitat up to 533,000 acres, or 43% of the species currently recognized range.

[1] Shuford, W.D. and T. Gardali, editors. 2008. California Bird Species of Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

We were not able to identify any other known population stressors (e.g., wildland fire, disease, invasive species) that would significantly threaten the San Francisco dusky-footed woodrat over the next 20 years.

While the species may warrant Species of Special Concern designation as defined by CDFG because of the woodrat is a native species with a relatively restricted range, the analysis suggest that woodrat habitat does not meet ESHA standards. The San Francisco dusky-footed woodrat is not rare, its habitat which includes woodlands, forest, and scrublands is widespread and abundant through the Coastal zone and throughout its range. 37 cont.

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31) IV.D-38, Impact D.2

Pilarcitos Quarry has obtained an Incidental Take Permit (ITP) from the USFWS for the continued operation of the quarry processing area as well as expansion into Area H (Biological Opinion 81420-2008-F-0294-1, October 22, 2010). The timing of the mitigation measure for obtaining additional ITP for expansion into additional areas is impractical. The DEIR calls for ITP to be obtained prior to certification of the EIR. This condition needs to be revised to require the ITP to be issued before any County permits are issued which could result in ground disturbing activities within the proposed expansion areas not already covered by an ITP. 38

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32) IV.D-43, Mitigation Measure D.2e

The mitigation measure calls for an exclusion fence to be constructed out of 3/4 –inch plywood or aluminum around the perimeter of the active quarry area. We recommend that this measure be revised to delete the specific reference to the fence material and allow for alternative designs approved by the United States Fish and Wildlife Service (USFWS) and the County. Under the ITP issued for the quarry operation and expansion onto Area H, the USFWS has approved use of an alternative exclusion fence material, E-Fence™ – Special-Status-Species Exclusion, a product of ERTEC. E-Fence is made of a rigid polymer matrix and has a number of advantages over plywood and aluminum fencing. 39

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33) IV.D-55, Impact D.12

While we agree with the basic conclusions for this impact presented on Page IV.D-58 of the DEIR, we disagree with the DEIR discussion that the project may conflict with LCP policy 7.4, Permitted Uses in Sensitive Habitats. The primary argument presented is that the proposed mining is not a resource dependent use. Policy 7.9, Permitted Uses in Riparian Corridors, allows for (2) consumptive uses as provided for in the Fish and Game Code and Title 14 of the California Administrative Code (see page IV.D-29 of the DEIR). Consumptive use is defined as the use of a resource that reduces the supply. While the LCP may not mention mining as a resource dependent use, Fish and Game Code allows for and requires permits for mining in streams (Fish and Game Code Section 1600-1616). As such, the proposed expansion into Areas A and B would seem to comply with Policy 7.9 and mining would be a resource dependent use under policy 7.4. 40

Additionally, under Policy 7.33, the following permitted uses are allowed for rare and endangered species: 41

a. Permit only the following uses: (1) education and research, (2) hunting, fishing, pedestrian and equestrian trials that have no adverse impacts on the species or its habitat, and (3) fish and wildlife management to restore damaged habitats and to protect and encourage the survival of rare and endangered species.

b. *If the critical habit has been identified by the Federal Office of Endangered Species, permit only those uses deemed compatible by the U.S. Fish and Wildlife Service in accordance with the provisions of the Endangered Species Act of 1973, as amended.*

The policy itself is unclear and can be interpreted to mean <u>either</u> comply with subsections a <u>or</u> b, or you must comply with <u>both</u> subsections a <u>and</u> b. However, there are a number of other Policies in the LCP such as, Policy 7.9, Permitted Uses in Riparian Corridors, where the subsections are clearly an "or" condition. Subsection "b" clearly adds to the allowable uses prescribed under subsection "a." 41 cont.

While we disagree with DEIR conclusion that all of the site must be considered an ESHA for the California red-legged frog, all of the proposed expansion areas lie within boundaries of critical habitat for the frog as designated by the USFWS. As long as the Quarry is able to obtain an ITP from the USFWS, the project would comply with 7.33(b). Since the USFWS has already issued an ITP for expansion into Area H (which is also in designated critical habitat), it seems reasonable that additional Master Plan expansion would also be able to obtain approvals as long as similar conditions can be met.

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34) IV.D-57, Impact D.12 (2nd paragraph on page)

This section states that, "Because there is suitable habitat for CRLF throughout the Pilarcitos Quarry property, the California Coastal Commission declared that all of expansion area H is 'sensitive habitat' and subject to the sensitive habitat policies of the LCP." This statement is incorrect and outdated. San Mateo County approved the Area H expansion (with no appeals to or from the commission) in March 2011. The expansion is moving forward in order for the quarry to continue to produce aggregate material for the region while the permitting process for the Master Expansion is being processed. 42

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35) IV.E-2, Setting, Introduction (last bullet on page) and Impact E.4

This is the first of many mentions of the acceleration and deceleration lanes that are planned to be developed at the entrance/exit to the quarry. This sections states that the quarry is required to construct these lanes under the existing permits, which is not the case. We do not have a condition in our existing permit that involves the construction of the acceleration and deceleration lanes. The construction of the lanes was discussed in the past but was never made an official requirement. Mitigation Measures E.4a and E.4b discuss how the County and the project applicant will work together with Caltrans to construct the lanes. If the lanes are not constructed by Caltrans before 2013, the mitigation measure reads that the project applicant would be responsible for all permit and installation costs. There does not appear to be a nexus for the requirement to construct the lanes within 2 years, and that time requirement could be unrealistic considering the quarry might not be ready to move into expansion areas by that time. Therefore, it is our opinion that the timing mechanism for lane construction should be tied to something more relatable to the expansion. The impact is based on the fact that we anticipated production numbers 43

to increase between 600,000 and 1 million tons per year, which would mean an increase on trucks entering and exiting the quarry causing a significant impact to that intersection. This impact is only listed as significant and unavoidable because the County can not impose mitigation measures when Caltrans has jurisdiction. Since the project requires approval from Caltrans, the mitigation measures can not technically reduce the impact until Caltrans approves the construction of the acceleration/deceleration lanes. The project applicant has approached Caltrans in the past and has prepared preliminary drawings of the lanes, however Caltrans has turned them away and said it was to their discretion as to when the lanes will be constructed. This situation with Caltrans needs to be further researched before conditions concerning the acceleration and deceleration lanes are incorporated as conditions of The Project.

43 cont.

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36) IV.F-23, Impact F.1

Based on the quarry's customer base and the information submitted in the attached Report, we have calculate that the average round trip haul length is 18 miles for 20% of the aggregate products destined to various locations on the Coastside, and a 30 mile average round trip for 80% of the aggregate products to travel to various locations on the Peninsula. The total average roundtrip length for haul trucks leaving the quarry would be 27.6 miles, nearly half of what was estimated in this section of the DEIR (50 mile round trip). Therefore, most of the impacts included in this section's analysis are significantly skewed.

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37) IV.F-34, Impact F.5

According to the Project Applicant's legal team, "If the quarry did not exist, then under the categories Cancer Risk, Acute Hazard and P.M.2.5, there is already a cumulative unavoidable significant impact. The issue from a CEQA perspective is whether the project will "contribute considerably" to these existing cumulatively significant impacts. Quantitatively the answer is no. The project will contribute 0.424% to the cancer risk, 0.068% to acute hazards, 0.041% to P.M. 2.5, and 1.43% to chronic hazard (which cumulatively at 7.71 does not reach the BAAQMD cumulative significance criteria). In other words, the project contributes less than ½ of 1% of the health risks in each of the three categories which cumulatively exceed the BAAQMD significance criteria... [n]either these numbers nor the distinction between existing quarry emissions and projected quarry emissions have been considered, which would reduce these figures even further." We believe there is no basis for the EIR to conclude that the project would "contribute considerably" to a significant cumulative impact. With that conclusion, the air quality impact would not be considered a significant unavoidable impact of the project. Further, this analysis is really one of cumulative impacts and hence belongs in Section V.

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38) IV.F-39, Mitigation Measure F.6a

Currently the site is in compliance with the BAAQMD and CARB. This mitigation measure, to become a reporting member of The Climate Registry seems unnecessary considering the quarry is subject to guidelines from multiple agencies that control the air quality emissions from the site. Additionally, if the quarry did not exist, there would be a significant increase in Green House Gases generated by the imported material from outside sources as detailed in The Report.

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39) IV.H-11, Impact H.5 (2nd paragraph in section)

This paragraph states that explosives are stored on-site in a locked explosive magazine, which is an out-dated and incorrect statement. There are no explosive stored at the quarry. The project applicant's blasting contractor brings explosives to the site as needed. 47

40) IV.1-14, Impacts I.1 and I.2

The EIR analysis does not treat the reclamation and revegetation plan as a mitigation measure, nor analyze in any detail the impact the revegetation will have in reducing the visual impacts. Consequently, there is no factual support for the EIR's stated conclusion that even with reclamation, the visual impacts will be significant and unavoidable. There will be visual impacts during the implementation of the Project. The first visual impacts will not be seen for 10 years and the largest visual impacts will not occur until 60 years into the Project (based on production levels). The project applicant has gone to great lengths to ensure successful revegetaion of mined slopes to reduce the potential visual impacts. We worked with a restoration firm produced a report (IERS Report, Attached) detailing how to successful reclaim slopes and we have developed revegetation test plots which are testing 24 different revegetation techniques in order to perfect the treatment of slopes prior to reclamation in the expansion areas (discussed further in The Report). We have also developed a revegetaiton plan that includes native plant species and would represent vegetation patterns as if the mined slopes were natural. None of these attempts to reduce the visual impacts were discussed in this section. Furthermore these visual impacts will be temporary. The largest impact would be when active mining is taking place on the slopes that are visible. After the initial mining takes place and the reclamation begins, the visual impacts will continue to be reduced as the vegetation grows. 48

To more effectively demonstrate the mining process, we have developed a series of plans and sections that break down the time spanned from Mining Phase II to Mining Phase III. From the vantage points used in the visual simulations, Mining Area A will be more visible than Mining Area B. Therefore, the quarry operators will begin in Mining Area B in an attempt to delay the visual impacts as long as possible. The phasing of mining plans and sections (Figures A through D) also explain that the quarry operators will progress through the expansion areas gradually, disturbing only one small area at a time. In the sections of this phasing one is able to see that when the hillside is excavated, large working plateaus are created that enable workers to easily and safely maneuver equipment while they implement the recontoured bench and revegetation plan as they progress down the hillside. We believe these figures help to describe how the mining progresses through each mining phase and that the quarry operators will only be working in one section of the expansion at a time. 49

41) IV.I-37, Impact I.3

The quarry is on private property where no trespassing is allowed. The only people that are allowed to enter the quarry property are employees, customers and contractors of the quarry. Each individual knows they are going to a quarry and expects to see a quarry when they arrive. The majority of those individuals have jobs because the quarry exists. Those people want to see the quarry change because that translates to retained jobs and income. Therefore the visual changes within the project site are welcomed by any individual that comes to the quarry. They do not interpret visual changes at the quarry to be negative as concluded by this section. 50

42) V-6, Impact V.2

In reviewing the cumulative impact analysis for biology, one must start by looking at the biological assessment for the quarry contained in Section IV. There are 12 potential impacts identified and mitigation measures described for each of the 12 impacts a finding is made that the impact, as mitigated, will not be significant. In the cumulative impact portion of the EIR, the analysis acknowledges that the project will have no individually significant impacts. A general statement is made, with no supporting information, nor with any indication of analysis that the quarry, in combination with other current and future projects, will have a cumulatively considerable impact on biology. There is not an analysis that determines the quantified impact of projects therefore it is difficult to know if the quarry will make a "considerable contribution" to that quantified impact.. If the analysis does exist, it should be imported into the Cumulative Impact section to explain the conclusion reached. Otherwise, the conclusion is not supported by substantial evidence and should be changed. 51

43) V-7, Impact V.3

This section finds a cumulative significant impact in the traffic portion of the EIR. (Section IV.E) We cannot find any information about overall traffic projections on a daily basis. Without that information, it is impossible to determine whether the portions of the quarry's trips that would be generated by the project (i.e., ignoring the current quarry traffic because that is part of the baseline) would "contribute considerably" to the overall traffic. Regarding peak traffic, Table IV. E-8 indicates that the project volume will contribute a maximum of 1.8% (in 2013) in the a.m. peak hour and a maximum of 0.6% (in 2010, which has already passed, the number actually decreases to 0.5% moving forward) for the p.m. peak hour. While it is debateable whether the a.m. number is cumulatively considerable (the p.m. number being less than 1%, should not be considered to be), the DEIR figures are misleading because they consider all of the project traffic. The analysis should treat the existing quarry traffic as a part of the baseline, and then focus on the increase in traffic from the project, which is what CEQA requires. Without that breakdown, there is no factual support for the EIR's conclusion that the project will contribute "considerably" to Highway 92 traffic either during the peak period or on a daily basis. In addition, if the quarry did not exist, there would be a significant increase in the amount of traffic on the County's roads based on the increase of importation of aggregate from outside the region as detailed in The Report. The increase must be accounted for the in the analysis. 52

44) VI-3, Reduced Mining Alternative, Description

This section needs to be updated to reflect the recent approval of the Area H expansion area. 53

45) VI-5, Reduced Mining Alternative, Description (end of 2nd paragraph on page)

There is a note in parenthesis that states "…the proposed Project…. proposes to construct a permanent earthen dam along the east side of mining Area A by Phase V." There are no plans to build a berm along the east side of Area A by Phase V. There is a berm in Phase III shown in the current mining area that was designed to be constructed in order to contain the water storage area during Phase IV. 54

46) No Project Alternative Comments

Indirect Environmental Impacts would be generated if the quarry was not able to meet San Mateo County's aggregate demand and the products needed to be imported from outside sources. The quarries and the locations that are mentioned in the analysis (Lexington, Steven's Creek, and Permanente Quarries) do not necessarily provide the same products as Pilarcitos Quarry. The Report discusses the availability of products in greater detail. It analyzes where the products are available and discusses how the increased distances of transporting the material into the County will affect both air quality and transportation to both the Coastside and the peninsula. 55

47) Reduced Mining Area Alternative Comments

The Reduced Mining Area Alternative analysis fails to recognize that this alternative does not eliminate the impacts, it simply gives the quarry a shorter lifespan and then shifts the impacts to other regions in order to make up for the lost resources. Additionally, to the extent that the DEIR preparers agree in the FEIR that certain of the impacts which they have determined in the DEIR to be significant and unavoidable are reduced to a level of insignificance with mitigation, then changes to Table VI-1 would be needed, although these changes would not affect the determination of which alternative was environmentally superior, because the changes would run across the entire chart. 56

Since this alternative reduces the total original project tonnage by nearly 60% it will make the entire expansion project infeasible. If the intent of this alternative was to avoid impacting the ESHA between mining area A and B, then why does this alternative eliminate Mining Area H and J? Neither of those mining areas impacts an ESHA. The purpose of the interim water storage was so that the project could begin providing environmental benefits prior to the end of the project. This alternative retains the water storage component, but it would not be available for over 60 years and it would have substantially less capacity than the final water storage feature in The Project. In our communications with the environmental community, they urged to have the water available as soon as possible that is why we developed the mining phases to demonstrate how we would accommodate their requests. 57

This alternative was developed to protect a marginal quality area that may not qualify as an ESHA, when the interim water storage component and the local aggregate availability substantially outweigh the benefits of retaining one secluded ESHA. Mining Area A is the most predominate mining area that will be visible from Skyline Boulevard and Skylawn Memorial Cemetery and contributes to approximately 75% of the original project visual impacts. The bench removal reclamation concept and corresponding revegetation test plots were developed with the intent to achieve greater vegetation coverage than the slope and bench configuration. Since this alternative eliminates the recontoured bench concept, it is our belief that there will be a greater visual impact with vegetation existing solely on the benches. Considering this alternative will result in reduced tonnage, the same indirect impacts as the No Project Alternative will eventually exist. 58

48) Reduced Annual Mining Volume Alternative

There is no need to impose a limit on production as there is no way to predict the purpose of the aggregate (could be needed to rebuild following a natural disaster) and this alternatives only 59

purpose would be to spread out impacts over a longer period of time. It could also delay the rate of reclamation which will contribute to additional impacts because visual relief and habitat restoration would be delayed. 59 cont.

The quarry controls the frequency of trucks that can be on the road in compliance with their current operating approvals. Limiting the annual production rate may produce inconsistent traffic which could cause additional problems. If, for example, the quarry reaches the production limit in November, then all of December no trucks would be entering or leaving the site, meaning they would need to travel to other quarries to gather the materials they needed (impacts analyzed in the No Project Alternative). Also, come January there may be an influx of trucks on the road again which would draw the attention of the commuting residents and possibly could lead to more complaints than just having a consistent number of trucks on the road. 60

Letter E. LSA Associates (Kevin Torell, AICP, Senior Planner)

E-1 The Project Description (page III-38) is revised as follows to incorporate the information on the 192.5 acre conservation easement noted in the comment:

> A ~~210-acre conservation easement is proposed for the northern portion of the quarry property, outside of the proposed expansion areas (see **Figure III-19**).~~ 192.5-acre conservation easement has been established in the northern portion of the quarry property, outside of the existing operations area and expansion areas **(see Figure III-19)**. This conservation easement was established specifically to mitigate the impacts of the Area H expansion, which was approved by the County in March, 2011, as well as ongoing impacts of quarry operation. This portion of the quarry property contains most of the upper Nuff Creek watershed and extensive habitat for many native species including most of the species that would be covered in the HCP. The ~~proposed~~ conservation easement ~~would~~ preserves in perpetuity extensive areas of native vegetation in the upper watershed. Native vegetation in the upper watershed facilitates groundwater recharge and contributes to perennial flows in Nuff Creek from winter precipitation as well as summer fog-drip. ~~This would provide a reliable water source for the proposed water storage features in the active quarry and benefit downstream aquatic habitat in the Pilarcitos Creek drainage, including habitat for steelhead, California red-legged frogs, and other native aquatic species.~~
>
> As part of the Project, the applicant proposes to mitigate additional lands disturbed by mining activity by adding additional undisturbed or reclaimed land to the existing conservation easement. The applicant proposes to add three acres of land to the conservation easement for each acre disturbed (a 3:1 mitigation ratio). This mitigation ratio was developed in consultation with USFWS. Since future mining outside of Area H would disturb an additional 107.4 acres, the applicant would eventually add roughly 322 acres to the existing 192.5-acre conservation easement, for a total of approximately 514.5 acres, out of the total 588-acre ownership. The applicant assumes that, after the conclusion of site reclamation, the entire property would be placed under a conservation easement. The particular areas to be added to the conservation easement prior to each mining phase would be agreed upon through consultation with USFWS.

Revised Figure III-19, depicting the 192.5-acre conservation easement, as well as the area included in the approved Area H expansion, is included in Chapter V, Revisions to the Draft EIR.

E-2 The commenter asserts that the EIR incorrectly identified the distance between the quarry and the City of Half Moon Bay as two miles. In preparing the response to this comment,

the distance between the Pilarcitos Quarry property boundary and the Half Moon Bay city limit was re-measured using different sources, and it is determined that the approximate two mile distance as described in the Draft EIR is correct. Consequently, no changes to the EIR are required.

Note that there was one incorrect reference to orientation/distance identified in the Land Use section of the EIR. Page IV.A-1 of the Draft EIR, second paragraph, fifth sentence is revised as follows

> The site is located roughly ~~2.5~~ two miles ~~northwest~~ east of the City of Half Moon Bay in unincorporated San Mateo County.

E-3 In response to the comment, Page III-3 of the Draft EIR, first full paragraph, last sentence is revised as follows:

> The property includes Assessor's Parcel Numbers 048-340-080, 048-350-020~~048-350-030~~, 048-350-070, 056-340-040, and 056-380-030….

In addition, Figure III-2 (Ownership Map) from the Draft EIR is replaced with Figure III-2a (Parcel Map of the Project Site) and Figure III-2b (Parcel Map of Surrounding Properties) in Chapter V, Revisions to the Draft EIR.

E-4 The commenter indicates that the average production levels for the quarry between 1993 and 2009 is 445,869 tons, not 449,000 tons as presented in the EIR. However, the historical production estimate used in the Draft EIR is based on all materials shipped, including materials mined on-site (average of 445,869 tons), plus recycled aggregate and asphalt materials that are imported to the quarry (average of 3,291 tons); this averages to a total historical production of approximately 449,000 tons per year.

The commenter indicates that the annual production range (600,000 to 1 million tons) listed in the Mining and Reclamation Plan is a range that the quarry is capable of producing and was used to estimate the duration of each mining phase in the plan, and also notes that the actual production range is dependent on market demands. The Draft EIR also acknowledges this circumstance, indicating "(t)he annual level of production at the quarry varies based on market demand" (page III-8).

The commenter also indicates the applicant does not believe the annual tonnage rates should be limited, except by the timing regulations governing how frequently haul trucks can leave the site. The Draft EIR discussion of annual production is consistent with the discussion of annual production in the applicant's Mining and Reclamation Plan, indicating, "(t)he Operator estimates that 600,000 to 1,000,000 tons of aggregate would be produced and shipped each year." The analyses contained in the Draft EIR, including the analysis of air quality, noise, transportation, and other effects, were all based on a maximum production level of 1,000,000 tons per year. Should the applicant desire to

produce and ship more than this level of material in any given year, additional environmental review pursuant to CEQA may be required.

E-5 The commenter indicates that Figure III-4 from the Draft EIR is outdated, and that Figure 3 from the Mining and Reclamation Plan provides current layouts of the quarry and sediment ponds. The reader is referred to Figure III-5 in the Draft EIR instead, which depicts the current layout of the quarry operations area and sediment ponds.

E-6 Please see the response to Comment E-39, below.

E-7 The commenter provides updated information on quarry water supply and use. The comment is noted as new information; see Chapter II of this document. This new information does not affect the impact analysis, nor mitigation measures or alternatives presented in the Draft EIR.

Page III-12 of the Draft EIR, under the heading "Water Supply and Use," is revised as follows:

> An on-site well located southeast of the maintenance shed building, producing about 35 gallons per minute (gpm), is used as the principal source of water for drinking and restrooms at the quarry office and the residence south of the office building; and can provide supplemental water for ~~and~~ dust control at the processing plant. The well is located more than 100 feet from Nuff Creek. Well water is pumped into storage tanks and is drawn from the tanks through a simple pipe system as needed. The quarry's main water source for processing operations comes from water stored during the rainy season in the retired mining pit; water is pumped to the processing plant and back to the retired mining pit. Maximum water use occurs during summer months when the harvested rock, stored aggregate, and haul roads tend to dry out. Water sprays at transfer points in the crushing, screening, and conveying processes utilize up to 1,000 gallons per day. Approximately 11,000 gallons per day is used to wet down loaded haul trucks and to supply the water truck that sprays the aggregate storage piles and the access roads.
>
> ~~Water used in the aggregate washing process is continuously recycled through the plant. Sediment removed by the wash process is transported through a slurry pipe to holding ponds for drying. Five percent or less of the process water is lost through evaporation, depending on the time of year. Water may also be pumped from the sediment pond system and from a second on-site well, generating about 100 gpm, located southeast of the process plant. When water is needed from the well, it is pumped into the sediment pond system at night, and then directly into the wash plant during daytime operations.~~

E-8 The commenter indicates that the existing permit conditions discussion in the Draft EIR should be updated with the conditions of approval listed for Area H, which were

approved by the County in March, 2011. Please see Chapter II, New Information, in this document, which includes a summary of the Conditions of Approval for the Area H Expansion; and Appendix A, which contains the complete text of the conditions.

E-9 In response to the comment, a revised version of Table III-2 is included in Chapter V, Revisions to the Draft EIR. For consistency, the following text changes have been made: the text on Page III-17 of the Draft EIR, last paragraph, second and third sentences is revised as follows:

> The expansion area is estimated to contain approximately 62 million tons of material, of which approximately 56 ~~50~~ million tons of net saleable aggregate reserves would be produced. In addition, approximately 6.2 ~~5.6~~ million tons of excavated intermixed sediments, as well as approximately 300,000 tons of excavated surface topsoil, would be salvaged and used in site reclamation.

Page IV.B-33 of the Draft EIR, third paragraph, second to last sentence is revised as follows:

> An estimated 6.2 ~~5.6~~ million tons or 4.1 ~~3.7~~ million cubic yards of intermixed sediments would be washed from the gross mineral resource and used as fill in the mining pits and create the final reclamation grading for the quarry floor.

E-10 It is noted that the re-contoured slope model planned for areas H and A+B would also apply to Area J. This information does not affect the impact analysis, nor mitigation measures or alternatives, presented in the Draft EIR. See Impact B.4 and Mitigation Measure B.4 in Section IV.B, Geology, Soils, and Seismicity, in the Draft EIR.

It is anticipated that San Mateo County's approval of the Project, should it occur, would be contingent upon the applicant's submittal, and the County's acceptance, of a Final/Conforming Mining and Reclamation Plan. This Plan would include any and all modifications specified as mitigation measures in the EIR, as well as any additional conditions imposed by the Planning Commission or Board of Supervisors.

E-11 The information on revegetation test plots is noted. The "Environmental Benefits Report" provided by the applicant, and referenced in this comment, is included in Appendix D of this document.

E-12 In response to this comment, the referenced paragraph on page III-35 of Chapter III, Project Description, of the Draft EIR is revised as follows:

> Decisions regarding use of the stored water would be made by ~~the Pilarcitos Creek Restoration Workgroup and incorporated into its integrated Watershed Management~~ a stakeholder group convened by the applicant for this purpose. ~~, or by applicable regulatory agencies, such as the National Oceanic and Atmospheric Administration, the National Marine Fisheries Service, or California Department~~

~~of Fish and Game.~~ The discharge structure would be designed to take water from the deeper portions of the storage pond, providing colder water temperatures.

E-13 A revised Figure III-19, showing the location of the 192.5-acre conservation easement, is included in Chapter V, Revisions to the Draft EIR.

E-14 In response to the comment, page IV.B-4 of the Draft EIR is revised as follows:

Artificial Fills and Disturbed Soils

Artificial fills refer to soil and rock materials—usually specially-designed mixtures of subsoil and rock—that are used to level an area to construct roadways or structures. Artificial fill can also be placed in an unengineered, haphazard manner as drainage fills or as a result of initial site clearing~~. In the Project area, artificial fills are most likely derived from washed fines generated during the mining process and are used in the construction of berms, as road fill, and to created level areas for process and storage facilities.~~ Artificial fills and disturbed soils underlie the majority of the active mining area and associated processing and storage facilities.

E-15 The Slope Analysis map prepared by the applicant and referenced in this comment is included in Appendix D of this document.

The applicant's Slope Analysis map indicates that the majority of the slopes in Areas A+B and H, and all of Area J (mislabeled on the map as Area L), are less than 75%. While the data used to prepare this map have not been reviewed or confirmed, the map itself indicates that Impact B.1 is correct in stating that, "…the proposed mining plan would substantially steepen the existing topography…." (page IV.B-23 of the Draft EIR).

E-16 The applicant has not provided analysis from their geotechnical consultant, Cleary Associates, to substantiate the conclusion of the statement made in this comment, that "…a wedge failure would not be large enough to create a seiche wave in the proposed water storage areas." Impact B.6 in the Draft EIR is based on analysis conducted by Seidelman Associates, and contained in Appendix E of the Draft EIR.

E-17 In response to the comment, the text of Impact B.6 (second and third paragraphs of the impact statement) on page IV.B-31 of the Draft EIR is revised as shown below. This does not affect the significance conclusion of the impact (i.e., the impact remains significant), nor Mitigation Measure B.6, which remains necessary to reduce this impact to a less-than-significant level.

An earthquake or landslide from the slopes surrounding a water storage feature could induce <u>a</u> seiche or a displacement wave, which would have the potential to overwhelm the dam and spillway facility (for Phase II of the mining plan), the earthen <u>or bedrock</u> berms (for Phases II, III and IV of the mining plan), or the

terrain divide between the permanent reservoir and Nuff Creek (Phase V of the mining plan). Failure of the bedrock berm(s) ~~Dam failure~~ could occur.

The volume and height of the displaced water would depend on the causative landslide (or earthquake) and the characteristics of the water storage pond. Overtopping ~~Dam overtopping~~ would be of most concern during active mining operations when mine personnel and equipment would be present, but could also have adverse impacts to water quality and sedimentation of Nuff Creek and Pilarcitos Creek if such an event occurred following reclamation. A very large overtopping or containment ~~dam~~ failure could result in catastrophic flooding downstream, including along State Route 92 and populated and cultivated areas in the Pilarcitos Creek Valley. Design details for the water storage pond in Phase II of the mining plan indicate the flood overflow tower would be sized to accommodate a 500-year peak flow event. Whether this is sufficient to accommodate landslide-induced displacement waves is not known. Further, the mining and reclamation plan does not provide details on the design and engineering standards for the various water storage features ~~earthen berms~~ to be constructed for the Project between Phases II and IV of the mining plan. Because many phases of the mining plan leave upland areas intact, and because those areas are susceptible to earth flows during heavy winter rains and earthquakes, the mining plan results in a potentially hazardous condition if the water storage features are not properly designed. This would be a significant impact.

E-18 This comment does not address the statement in Impact B.7 in the Draft EIR regarding the unknown condition of the Nuff Creek culvert, and its potential to deteriorate and cause increased sedimentation of Nuff Creek during proposed future mining operations, should the Project be approved. Mitigation Measure B.7d requires initial and periodic inspection of the structural integrity of the culvert, and repair of any failure or imminent failure.

E-19 This comment, regarding the applicant's anticipated infrequency of discharge of water from the sediment ponds to Nuff Creek, is noted.

E-20 Many quarries throughout the United States commonly use multiple-delayed charges within blast holes to conform to vibration control requirements. With 4.5-inch holes, the Pilarcitos quarry would be able to do all blasting with no more than three delayed-decks per hole. All competent contract blasting companies are proficient in delay-decked blasting. This mitigation measure is feasible and is necessary to ensure blasting associated with the Project does not cause significant vibration at neighboring properties.

E-21 All blasts can be designed with stemming equal to 20 charge diameters. If short benches are used, the hole diameter can be reduced. For example, if a 10-foot bench is used, the size of the hole would typically be reduced from 4.5 to 3 inches, and the stemming required would accordingly be reduced from 7.5 to 5.0 feet (20 x 3 /12). The geometry is relative. Using larger-than-appropriate holes for short benches and reducing the

stemming could result in hazardous fly-rock and air-overpressure problems. This mitigation measure is both feasible and necessary to reduce potential adverse effects of blasting.

E-22 There is nothing to prevent the applicant from using a third party to conduct the monitoring for methane required in Mitigation Measure B.8. Monitoring is typically done with a hand-held methane meter.

E-23 The comment is noted. Mitigation Measure B.8 has been crafted to address the specific, potentially significant impacts of the Project, as identified in Impact B.8.

E-24 The applicant's hypothesis regarding the origin of the seep described on page IV.C-4 of the Draft EIR is noted.

E-25 Figure IV.C-3 in the Draft EIR does not purport, and is not intended, to depict jurisdictional wetlands verified by the Army Corps of Engineers (Corps). As stated in the comment, Corps-verified jurisdictional wetlands are depicted in Figure IV.D-2 in the Draft EIR.

E-26 The information in the comment regarding use of flocculent and effects on groundwater quality is noted. It would appear that the use of flocculent, as described by the applicant in this comment, could still affect the quality of groundwater, since the wash water containing flocculent is pumped to a separate process water pond. Since, however, there is no direct evidence of this occurring, the passage questioned in the comment is considered speculative, and page IV.C-11 of the Draft EIR is revised as follows:

> BHI collected groundwater samples from the Streamside Well and the Sediment Pond Well during the field investigation in October 2006. The groundwater samples were analyzed for the same constituents as the surface water samples. The results indicate that groundwater collected from the Streamside Well is similar to surface waters: a calcium bicarbonate water of relatively low specific conductance, quite typical of the Montara Mountain granitic aquifers (BHI, 2010). The groundwater sample collected from the southern well near the sediment pond has a different ionic balance. It appears to be relatively rich in sodium relative to calcium and magnesium. Other minerals, including calcium and bicarbonate, are also low in this sample relative to the other water samples, including calcium and bicarbonate, and the pH is elevated. ~~These results suggest that the ion balance in groundwater beneath the pond may be altered from the flocculent used to settle solids in the ponds. Conceivably, the flocculent may also account for the moderate levels of boron and fluoride and detected levels of zinc in this sample. However, these elements, in combination, often occur in deep waters emanating upward through regional fracture or faulting systems, which may not reflect other geologic or landfill influences. This is plausible given that the Pilarcitos fault is about a mile northeast of the site and the well is deep enough to possibly intersect deep joints in the bedrock~~ (BHI, 2010).

E-27 As noted in Mitigation Measure C.1d, the requirement to implement a storm water sampling and analysis program to monitor the quality of water discharged from the quarry site to Nuff Creek and Pilarcitos Creek is intended to supplement, but not replace, monitoring required under the NPDES General Permit. Furthermore, as a Responsible Agency for the Project, the Regional Water Quality Control Board may rely on mitigation measures contained in this EIR, including the measure referenced in this comment, in revising existing permits or issuing new permits required for the Project.

E-28 Please see the response to Comment E-10, above.

E-29 Mitigation Measure C.2c requires the applicant to design all constructed features included in the facility's drainage plan to accommodate the 20-year, 1-hour design storm, per SMARA requirements. This is a basic civil engineering standard common to design of drainage features, and also, as noted above, reflects SMARA requirements. While such calculations can be performed by other professionals, a civil engineer's stamp on drainage facility design would help ensure that this mitigation measure is implemented effectively.

E-30 Establishment of stream monitoring stations and groundwater monitoring wells, as specified in Mitigation Measure C.4b, is necessary, first, to establish a baseline of streamflow and groundwater gradient conditions, and, later, to detect any changes in either of these. It is important to install these monitoring stations and wells soon after Project approval, should such occur, in order to establish an accurate baseline, which could itself take several years. San Mateo County would consider "Project approval" to occur when the last appeal, if any, is heard and decided upon.

E-31 A conclusion regarding whether any detected alteration in baseflow would trigger the requirement to cease mining would be based on the statistical analysis of historic stream flows required as part of the Annual Streamflow Monitoring Report required in Mitigation Measure C.4b. To clarify this point, page IV.C-28 of the Draft EIR, last paragraph above "Level of Significance after Mitigation," is revised as follows:

> If the applicant fails to obtain a permit to divert and store water from Nuff Creek, or if the Water System Operation and Management Plan fails to demonstrate that baseflows can be maintained by releasing water from a water storage facility, or if the Periodic Hydraulic Report indicates that future mining will <u>result in a statistically significant reduction in baseflows that, after consultation with the RWQCB, is determined to</u> adversely affect baseflows, then the applicant shall cease mining in the area determined to be adversely affecting baseflows, and shall prepare an application to amend its Mining and Reclamation Plan to avoid creation of a groundwater gradient from Nuff Creek into an adjoining mining pit or water storage facility. This may include modification of the final grading plan to avoid creating a deep pit in close proximity to the creek. Such a modification of the Mining and Reclamation Plan may be subject to additional environmental review under CEQA and County approval.

E-32 The conclusion of a potential for a significant Project impact for Impact C.6 is based on the analysis of bedrock jointing and groundwater conditions discussed in the impact statement (and in the Hydrologic Technical Memorandum in Appendix F of the Draft EIR), which predicts that mining of Areas A+B could alter the groundwater gradient or intercept groundwater flows from beneath the Ox Mountain Landfill. In the absence of the Project (that is, under baseline conditions), such a circumstance would not be expected to occur; if this were to occur, it would be a direct consequence of the Project, and is therefore properly considered a Project impact.

E-33 Mitigation Measure C.7a notes that the quarry currently uses water from sediment ponds for a portion of its operational water needs, and that this practice would continue under the Project. As stated in Impact C.7, the proposed Project would considerably alter the groundwater hydrology of the Nuff Creek watershed over the approximately 100 years of mining under the proposed Mining and Reclamation Plan, by removing topsoil and trees and exposing additional impervious surfaces consisting of bedrock mining faces, roads, and operation areas. These alterations could change the surface water/aquifer interaction leading to increased runoff and decreases to the water available for deep recharge. There is a potential that, over the projected years of mining, available groundwater resources would gradually diminish due to lack of recharge and the volume of sustainable groundwater supply available for quarry operations would decrease.

The significance criteria used in the Hydrology and Water Quality analysis (see pages IV.C-18 and IV.C-19 of the Draft EIR) state that an impact is significant if it substantially depletes groundwater supplies or interferes substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table levels. Impact C.7 predicts that, under existing conditions and forward into the next several years, the underlying groundwater resource would not be substantially affected. If there would be a substantial loss in recharge, and thus a depletion of groundwater resources available to the Project site, it would probably be a very gradual decline and would not be realized until several years into the Project, when a large majority of the mining is underway and some expansion areas have been mined and reclaimed. Nevertheless, because there is a future potential for the Project to adversely affect groundwater resources, this impact is considered significant.

Immediate implementation of Mitigation Measure C.7b, which requires periodic monitoring of groundwater levels, would provide a baseline against which future changes could be measured.

E-34 To correct the error pointed out in the comment, the text of page IV.D-10 in the Draft EIR is revised as follows:

> Under the California Coastal Act and San Mateo County LCP, sensitive communities are referred to as environmentally sensitive habitat areas (ESHAs). There are approximately 151 acres of ~~wetland~~ ESHAs within the ~~proposed expansion area~~ quarry property, including perennial and intermittent creeks (Nuff

Creek and its tributaries), riparian areas bordering these creeks, and wetlands (all of which are described above) and defined buffer areas. LSA biologists identified and mapped these ~~wetland~~ ESHAs ~~throughout the Project area~~ (**Figure IV.D-3**) (LSA, 2008).

E-35, and 36. The applicant's differing interpretation of areas that should be considered ESHAs, based on habitat for special-status species, is noted. As noted on page IV.D-10 of the Draft EIR, the San Mateo County LCP also considers special-status species habitats to be ESHAs. Two special-status species, the California red-legged frog (CRLF) and San Francisco dusky-footed woodrat, are present within the largely contiguous, 588-acre Project site. While their breeding habitats/nests are in isolated locations within the quarry property, these species are not restricted to breeding sites, but travel through adjacent non-breeding habitats to hibernacula and aestivation habitat (in the case of CRLF), and foraging habitat (in the case of San Francisco dusky-footed woodrat). Quarry expansion activities will fragment breeding habitat from nonbreeding habitat, and may restrict movement of the species from their breeding sites, or otherwise adversely impact them through injury or death while moving through active quarry sites. The principal argument against the ESHA designation is that frogs move only limited distance, and mainly through mesic habitats. The comment acknowledges that frogs may move up to 0.8 miles, but is mistaken in assuming frog reliance on mesic areas. Bulger (2003)[1] conducted telemetry studies on 25 frogs in coastal Santa Cruz County and found that: "Most migrating frogs moved overland in approximately straight lines to target sites without apparent regard to vegetation type or topography. Riparian corridors were neither essential nor preferred as migration routes. Frogs traveling overland occurred in upland habitats as far as 500 m from water." There may be reasonable differences of opinion among biologists, but it is consistent with the intent of the ESHA that the more conservative information support the designation. A secondary argument that the presence of frogs within the active quarry area somehow establishes that the species was free to move between active sites -- is speculative, and does not answer the question of how many frogs are harassed or harmed.

E-36 Please see the response to comment E-35, above.

E-37 Please see the response to comment E-35, above. The comment that the dusky-footed woodrat presence does not qualify a site as an ESHA is not without merit, and it is granted that the species does not experience the same degree of threat as does the red-legged frog; we do not dispute the evaluation of the conservation status prepared by LSA. Nevertheless, the State's definition of "Species of Special Concern," i.e., one that "has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status" is consistent with the LCP policies. It is worth noting that the red-legged frog has

[1] Bulger, J.B., Scott Jr. N. J. b, and R. B. Seymour. 2003. Terrestrial activity and conservation of adult California red-legged frogs *Rana aurora draytonii* in coastal forests and grasslands. Biological Conservation 110 (2003) 85–95.

a similar status, and the California tiger salamander was also a Species of Special Concern until its recent listing under CESA.

E-38 In response to the comment, the text of Impact D.2 on page IV.D-38 of the Draft EIR is revised as follows:

> The CRLF is a federally Threatened species. The applicant has already obtained ~~, and therefore the Project applicant must obtain~~ an Incidental Take Permit (ITP) from the USFWS as required by the FESA, covering existing operations and the expansion of mining into Area H. ~~prior to certification of this EIR~~ Prior to issuance of any County permits which could result in ground-disturbing activities within proposed expansion areas A+B and J, the applicant must obtain ITP coverage for these areas and activities.

E-39 In response to the comment, Mitigation Measure D.2e on page IV.D-43 of the Draft EIR is revised as follows:

> **Mitigation Measure D.2e:** *Exclusion Fencing.* ~~An exclusion fence constructed out of three-quarter-inch plywood or aluminum will be installed around the perimeter of every active quarry area and will have one-funnel trap doors placed at various locations to allow snakes within the active quarry area to escape but not enter. The fence will be built with two-foot-wide boards bolted together, with the base buried six inches deep in the substrate. The fence will exclude potential dispersing CRLF and SFGS from the active quarry area and confine them to ESHAs, if they move through the Project site. (This measure was taken from LSA's 2007 Mitigation and Monitoring Plan Pilarcitos Quarry (Expansion Area 2) for expansion area H, but shall apply to all expansion areas).~~ A snake and frog-proof barrier shall be placed around the perimeter of each mining expansion area prior to ground disturbance. All fence designs and locations shall he provided to the Service for approval at least 10 working days prior to installation. All exclusion fencing shall be checked regularly and maintained in good working order.

E-40 The applicant's interpretation of LCP policies, as expressed in this comment, is noted.

E-41 Please see the responses to Comments E-35 and E-40, above.

E-42 The statement attributed to the California Coastal Commission on page IV.D-57 of the Draft EIR regarding the presence of sensitive habitat area within Area H, is contained in a letter from the Coastal Commission to San Mateo County dated September 25, 2007, commenting on the County's Notice of Intent to adopt a Mitigated Negative Declaration for the then-proposed Area H expansion. This statement is supported by the USFWS Biological Opinion (see Appendix B of this document). Regarding approval of the Area H expansion, please see Chapter II, New Information, in this document.

E-43 The commenter's assertion about conditions in the quarry's existing surface mining permit is technically correct: as listed on page III-16 in Chapter 3 in the Draft EIR,

Condition 16 from the County's 2003 Conditions of Approval refers to the applicant's responsibility related to construction of acceleration/deceleration lanes; however, as discussed in Chapter II, New Information, this condition was not carried over into the Conditions of Approval for the recently-approved Area H expansion. Therefore, this condition is no longer in effect for the quarry. Nevertheless, Mitigation Measure E.4b (page IV.E-26 of the Draft EIR) is still needed to mitigate the traffic safety impact of the Project (Impact E.4). To provide greater flexibility in implementing this measure in light of the uncertainties in obtaining the necessary approvals from CalTrans, the text of that mitigation measure is revised as follows:

> **Mitigation Measure E.4b:** The Project applicant shall work with Caltrans to ensure that acceleration and deceleration lanes are installed along the Project access frontage. ~~as required under the existing operating permit. If funding is unavailable or construction would not occur before 2013, then the Project applicant would be responsible for all permit and installation costs.~~

The text in the paragraph under Mitigation Measure E.4b (page IV.E-26 of the Draft EIR) accurately describes the level of significance after mitigation. That is, if the measures were implemented, the impact would be reduced to a less-than-significant level. Because the measures could not be implemented without the approval of Caltrans, and that approval cannot be guaranteed by the County, the impact is correctly stated as significant and unavoidable.

E-44 As discussed in Chapter I in the Draft EIR, the EIR analysis is based on reasonable but conservative assumptions that tend to provide the "worst case" for Project impacts. While future market conditions are uncertain, it is likely that the average travel distance to market for aggregate materials will increase over time, as existing quarries close. Furthermore, the Project applicant has stated that they expect an increase in production in future years, relative to the baseline; it is reasonable to assume that, under the Project, some of the additional materials may travel greater distances than at present, thus increasing the average distance for truck trips.

However, in light of the updated data supplied by the commenter, the emissions in Tables IV.F-6 and IV.F-15 of the Draft EIR are revised below to reflect a round trip distance of 30 miles (an average of 15 miles to destination location) which allows for a 10 percent increase in the average trip length figures provided by the commenter. See Appendix E for revised spreadsheets calculations. See also the corresponding text changes in Impact F.1 and Impact F.6 in Chapter 5, Revisions to the Draft EIR. This does not affect the significance conclusion of Impacts F.1 and F.6 (i.e., the impacts remain significant), nor does it affect Mitigation Measures F.1a, F.1b, F.6a, and F.6b, all of which remain necessary to reduce these impacts to a less-than-significant level.

TABLE IV.F-6
ESTIMATED PROJECT MAXIMUM ANNUAL NET INCREASE IN ANNUAL AIR EMISSIONS (2011)

	Emissions (tons/year)				
Source	**NO_x**	**PM_{10}**	**ROG**	**$PM_{2.5}$[a]**	**CO**
Excavation Equipment Exhaust	3.99	0.19	0.48	0.17	2.19
Fugitive Dust from Excavation	_ _	0.47	_ _	0.09	_ _
Fugitive Dust From Blasting	_ _	0.05	_ _	0.01	_ _
Fugitive Dust from Mined Material Processing	_ _	4.77	_ _	0.35	_ _
Fugitive Dust from Recycled Aggregate, Concrete and Asphalt		1.48		0.12	
Truck Trips	9.92 ~~16.53~~	0.34 ~~0.56~~	0.98 ~~1.64~~	0.28 ~~0.46~~	10.24 ~~17.06~~
Worker Trips	0.02	<0.01	0.01	<0.01	0.22
Total	**13.93 ~~30.5~~**	**7.3 ~~7.52~~**	**1.47 ~~2.13~~**	**1.02 ~~1.20~~**	**12.65 ~~19.3~~**
Threshold	10	15	10	10	None
Significant?	**Yes**	No	No	No	No

[a] Fugitive PM2.5 emissions are calculated based on PM10 emissions factors and URBEMIS Fugitive Dust calculations that reports that approximately 20 percent of PM10 from grading dust is in the form of PM2.5. Exhaust PM2.5 is based on EMFAC emission rates.

SOURCE: Environmental Science Associates, 2011 (Appendix E)

TABLE IV.F-15
ANNUAL INCREASE IN GREENHOUSE GAS EMISSIONS
(IN METRIC TONS PER YEAR OF CARBON DIOXIDE EQUIVALENT [MT CO_2E])

	CO_2	**CH_4**	**N_2O**	**Total**
Fossil Fuel Combustion				
Off-road equipment	318	1	2	321
On-road: trucks and cars	1,303 ~~2,157~~	1 ~~2~~	10 ~~17~~	1,315 ~~2,176~~
Subtotal: Fossil Fuel Combustion	1,621 ~~2,475~~	2 ~~3~~	13 ~~19~~	1,636 ~~2,497~~
Electricity Use	254	0.3	0.8	255
Land Conversion				
Loss of sequestered organic carbon	161			161
Short-term loss of carbon sequestration potential	490			490
Long-term loss of carbon sequestration potential (100 years)	245			245
Subtotal: Land Conversion	897			897
Total	**2,772 ~~3,625~~**	**2**	**14 ~~20~~**	**2,788 ~~3,649~~**
BAAQMD Significance Threshold				1,100
Amount over Threshold				1,688 ~~2,549~~

NOTE: Figures may not add correctly due to rounding

SOURCE: Environmental Science Associates, 2010, 2011 (Appendix E)

E-45 The applicant's legal team's interpretation of the significance of cumulative health risk effects is noted. The methods and interpretation used in the Draft EIR are consistent with current practice under CEQA and guidance from the BAAQMD and the State Office of Environmental Health Hazard Assessment (OEHHA). The reader is directed to Appendix C of the Draft EIR, which clearly outlines the methodology for this analysis, and its consistency with BAAQMD and OEHHA guidance.

E-46 Neither BAAQMD nor CARB has direct regulatory authority to reduce greenhouse gas emissions from the quarry. Since the Project has the potential to result in a significant increase in GHG emissions, the EIR must identify feasible measures to reduce them to less than significant. The measures stated in the Draft EIR (Mitigation Measures F.6a and F.6b) are both feasible and effective in doing so.

E-47 In response to the comment, the text of Draft EIR is revised as follows:

Page IV.H-1 of the Draft EIR, second paragraph, third sentence is revised as follows:

> Most of the hazardous materials handled in quantity on-site are located in the fuel containment center, the maintenance shop, the plant shop, ~~explosive magazines,~~ and the warehouse.

Page IV.H-11 of the Draft EIR, second to last paragraph is revised as follows:

> No explosives are stored at the quarry. "~~Explosives are stored on-site in a locked explosives magazine, which is accessed by the quarry's blasting contractor.~~ The blasting contractor delivers adequate quantities of explosives to the site on days when blasting is planned. All unused explosives and detonators are returned ~~to the on-site explosives magazine or~~ to the blasting contractor's secure off-site magazines at the end of each day that a blast occurs.

E-48 The commenter asserts that the Draft EIR does not treat the reclamation and revegetation plan as a mitigation measure, nor analyze in any detail the impact the revegetation will have in reducing the visual impacts.

The reclamation and revegetation plan is part of the proposed Project, and is illustrated and described in detail in the Draft EIR Project Description, including the proposed revegetation of mined slopes, as well as restoration and revegetation of the quarry floor and Nuff Creek and creation of the proposed water storage features. The EIR Project Description (Chapter III) references the proposed adaptive management approach of using small-scale test plots discussed in the IERS Report to determine the most effective reclamation treatments. The EIR Project Description also discusses the proposed vegetation communities to be used in site revegetation, including grasslands, coastal scrub, riparian woodland, Douglas fir forest, freshwater seeps and cliff face/rock outcrop. Furthermore, the Draft EIR Aesthetics section (Section IV.I) includes several visual simulations prepared by the Project applicant which show the proposed reclamation

progress by mining phase as seen from viewpoint perspectives on Skyline Boulevard and Skylawn Memorial Park. The Draft EIR Aesthetics section also describes the aesthetic changes of proposed mining and reclamation by mining phase on those views.

The commenter mischaracterizes the Project visual impacts as "temporary." First, the proposed Project would be a long-term (approximately 100 years) plan that would accommodate mining on slopes that would be visible from certain public viewpoints for an extended duration. Secondly, the alteration of slopes and ridgelines as a result of the proposed Project would be permanent and irrevocable. The Draft EIR acknowledges that proposed incremental on-going reclamation would serve to reduce visual impacts through slope recontouring and revegetation, and as vegetation matures over time, would allow the mined areas to gradually blend with the surrounding natural landscape. Nevertheless, the Draft EIR finds that the alteration of slopes, the lowering of ridgelines, the removal of natural vegetation and exposure of bedrock, and the visible hillside mining activities of extended duration, would together constitute a substantial change to existing long-range scenic views, including from State Route 35, a State-designated scenic roadway. The Draft EIR also finds that it may be unavoidable for the Project to conflict with certain Local Coastal Program visual resource policies for impacting public views and preserving the visual and open space quality of the area. Please see also the response to Comment E-49, below, regarding additional information on incremental reclamation.

E-49 The commenter provides a series of plans and cross-sections that illustrate an example of the proposed sequence of mining and reclamation within a mining phase (in this case, within Phase III).

The example provided by the commenter is helpful in illustrating the applicant's proposed approach for incrementally reclaiming slopes within a mining phase, and how the amount of disturbed mined area visible at any one time would be minimized. It should be noted that the Draft EIR acknowledges that incremental reclamation would occur, and serves to help mitigate aesthetic impacts, although not to a less-than-significant level. See also Response to Comment E-48, above.

E-50 Impact I.3 in the Draft EIR addresses the potential for the project to result in a substantial degradation in the intrinsic visual character of the site. The determination of the impact is based on the visual analysis of the Project, which concludes that the Project will result in a substantial irrevocable physical alteration of Nuff Creek Canyon (in this case, a substantial change in landform and shape, and removal of vegetation). This judgment is made independent of personal opinions of employees or other visitors to the Project site. As discussed in Impact I.3, the proposed final reclamation would return the Project site to a natural state to the extent feasible; however, the impact would remain significant.

E-51 As stated in the text of Impact V.2, in Chapter V, Cumulative Effects and Other Required Topics of the Draft EIR, the conclusion of a significant cumulative biological resources impact is based on the conclusion that the Project would make a cumulatively considerably contribution to habitat loss and ongoing disturbance of wildlife from

industrial operations in the Pilarcitos Creek Watershed, including those occurring at the neighboring Ox Mountain Landfill.

E-52 As stated in the text of Impact V.3, in Chapter V, Cumulative Effects and Other Required Topics of the Draft EIR, the conclusion of a significant cumulative traffic impact is based on the conclusion that the Project has the potential to result in a cumulatively considerable (and therefore significant) contribution to traffic and traffic safety on State Route 92, because it could result in a substantial annual average (not peak day or peak hour) increase of truck traffic.

E-53 The description of the Reduced Mining Area Alternative, on page VI-3 of Chapter VI, Alternatives to the Project, is revised to reflect the recent approval of the Area H expansion, as follows:

Reduced Mining Area Alternative

Description

The Reduced Mining Area Alternative would limit expansion of the mining area to a modified Area A; see **Figure VI-1**. Proposed mining Areas B~~,~~ and J ~~and H~~ would not be mined, but rather, would be preserved in their existing condition. Mining would occur in Area H as already approved.

E-54 The commenter indicates that there are no plans to construct a permanent earthen dam along the east side of mining Area A by Phase V. The following changes are therefore made to Chapter VI, Alternatives of the Draft EIR:

Page VI-5 of the Draft EIR is revised as follows:

> As under the proposed Project, this alternative would ultimately provide water storage to be used for streamflow augmentation, on the conditions that background studies showed that this could be done without significant impact to water quality and biological resources, and that the applicant applies for and obtain water rights for diverting and storing water from Nuff Creek. While mining is occurring in modified mining Area A, high flows from Nuff Creek would be directed to a small interim water storage feature developed in Area I, as shown in Figure VI-1 (similar ~~but not necessarily identical~~ to the configuration and design proposed for the Project in Phase III ~~IV~~, however, in contrast to the Project, no temporary dam would be created along the southeast side of Area I). Upon completion of mining in modified mining Area A, the mining area would be filled with remaining overburden and fines, and then prepared to transition for use as water storage. Area I would be reclaimed as wetlands and open stream channel. Water would be released from the water storage facility to the restored creek to augment flows (as proposed under the Project); Area A slopes would also undergo final reclamation.

> The final water storage facility in modified mining Area A under this alternative (which would have a tentatively estimated capacity of 1,100 acre feet) would be substantially smaller than that proposed under the Project for combined mining Areas A+B (approximately 4,800 acre feet). ~~The final configuration of modified mining Area A would be such that no dams would be created to support its final use as a water storage feature (in contrast to the proposed Project, which proposes to construct a permanent earthen dam along the east side of mining Area A by Phase V).~~

Page VI-12 of the Draft EIR, first paragraph, fifth sentence, is revised as follows:

> Overall potentially significant but mitigable seismic-induced risks (e.g., landslides, liquefaction, seiche) associated with this alternative would also be expected to be less than the Project, given that no earthen dam would be constructed for the <u>interim</u> water storage feature <u>in Area I</u>, and because of the substantially reduced final water storage volume within modified mining Area A.

E-55 The potential for the No Project Alternative to result in greater transport distances for aggregate materials, and therefore an increase in traffic and air quality impacts, is discussed under the heading of Potential Indirect Environmental Impacts, beginning on page VI-9 of the Draft EIR.

E-56 Potential Indirect Environmental Impacts of the Reduced Mining Area Alternative are discussed on Page VI-16 of the Draft EIR; the discussion notes that under this alternative, the period of mining would be shortened to 25 to 50 years, and thereafter, increased air quality and traffic effects, such as those discussed for the No Project Alternative (see response to comment E-55) would be expected.

No conclusions of significance are changed in this Final EIR, and therefore, no revisions are made to Table VI-1.

E-57 This comment provides several points supporting the applicant's position that the Reduced Mining Area Alternative should be rejected, including an allegation of economic infeasibility. The applicant has not provided any information to support this allegation.

E-58 As stated in the description of the Reduced Mining Area Alternative on page VI-5 of the Draft EIR, this Alternative was crafted specifically to reduce direct impacts to the ESHA that exists between Areas A and B, and to reduce a range of other geologic, hydrologic, water quality, and other environmental effects associated with the proposed quarry expansion and water storage features.

E-59 The applicant's analysis of the Reduced Annual Mining Volume Alternative is noted. Note that, in Table VI-1 in Chapter VI, Alternatives, in the Draft EIR, and in the discussion of the Environmentally Superior Alternative in that chapter, the Reduced

Mining Volume Alternative is found to have greater or equal adverse environmental effects compared to the Project as proposed, except air quality impacts, which would be lesser; and this alternative is not found to be environmentally superior.

E-60 The possible impacts of the Reduced Annual Mining Volume Alternative with respect to truck traffic posited by the applicant are speculative.

This comment letter contained a number of attachments. These attachments are included as Appendix B and D in this document.

Summary of Planning Commission Public Hearing Comments on the Draft EIR

The County held a public hearing to receive oral comments on the Draft EIR at the San Mateo County Planning Commission meeting on June 8, 2011, at the Board of Supervisors Chambers in Redwood City.

No members of the public offered comment at the Public Hearing. The following Planning Commissioners provided oral comments on the Draft EIR:

- Gail Slocum, Planning Commissioner, 4th District
- William Wong, Planning Commissioner, 1st District
- Frederick Hansson, Planning Commissioner, 2nd District

The Planning Commissioners provided the following comments:

PC-1 Regarding use of the term "reclamation" or "restoration," how are these defined – what are the objectives of reclamation? The EIR should consider historical conditions. But what is the past condition to be restored or reclaimed? Are there pictures of what the site looked like before mining started? Are historical air photos available?

PC-2 The mining phases occur over a long period of time, and the length of time given in the EIR for each mining phase states a wide range. What determines the actual length of time for each mining phase? Market conditions? How can market conditions be predicted?

PC-3 How much of an increase in production is the applicant asking for?

PC-4 Does the County have ordinances or regulations that regulate mining?

PC-5 The EIR should examine environmental effects of similar mining operations in San Mateo County and elsewhere. What types of impacts can be expected?

PC-6 The proposal and the EIR cover a very long period. If we approve this Project, will that be the last approval for the whole mining and reclamation plan? Or will there be additional approvals along the way? If so, will there be a requirement for additional CEQA review?

PC-7 What if we never get to the end of the mining plan – can they skip ahead to ensure that the site is reclaimed?

PC-8 The applicant is required to post a bond to cover the cost of site reclamation. How is the amount of the bond determined, and is it ever updated? Is the County adequately protected if the mine owner goes bankrupt or defaults on their obligations?

PC-9 The Greenhouse Gas impact in the Air Quality section includes use of carbon credits to offset the Project's greenhouse gas emissions. How will such credits be certified or verified?

Responses to Planning Commission Public Hearing Comments

PC-1 "Reclamation" is defined in §2733 of the California Surface Mining and Reclamation Act (SMARA) as follows:

> "Reclamation" means the combined process of land treatment that minimizes water degradation, air pollution, damage to aquatic or wildlife habitat, flooding, erosion, and other adverse effects from surface mining operations, including adverse surface effects incidental to underground mines, so that mined lands are reclaimed to a usable condition which is readily adaptable for alternate land uses and create no danger to public health or safety. The process may extend to affected lands surrounding mined lands, and may require backfilling, grading, resoiling, revegetation, soil compaction, stabilization, or other measures.

The applicant's objectives for the Project are stated in the Project Description (Chapter III of the Draft EIR):

- describe the processes that would minimize environmental impacts during and resulting from mining;
- maximize the amount of reclamation that can be done concurrent with mining;
- leave the site, following mining, in a condition that is safe, stable, and readily adaptable to alternate land uses;
- to acknowledge the regional importance of the aggregate resource and to protect it against incompatible land uses;
- to provide a continuing, reliable source of high quality aggregate for customers in San Mateo County and the surrounding region;
- to help San Mateo County be self-sufficient with respect to aggregate resources;
- to protect and conserve aggregate resources at the Pilarcitos Quarry location far into the future;
- to maximize the quantity of aggregate resource that can be extracted from the site;
- to avoid direct physical disturbance to identified environmentally sensitive habitat areas (ESHAs); and
- to reclaim the site to a condition that is safe, stable and readily adaptable to general open space/rangeland use.

As can be seen from the above, neither State law nor the applicant's own objectives for this Project anticipate that the site would be restored or reclaimed to a condition mimicking pre-disturbance conditions.

The EIR uses existing physical conditions at the time that the Notice of Preparation was issued for the EIR (November, 2006) as the baseline for the environmental analysis. See Section G, Environmental Baseline, commencing on page III-40 of Chapter III, Project Description of the Draft EIR for more detail on the definition of the baseline for the environmental analysis contained in the EIR.

With regard to historical air photos, **Figure IV-1** is an air photo of the vicinity of Nuff Creek Canyon, circa 1956. State Route 92 is clearly visible in the figure. The approximate area of the existing permitted quarry operation is outlined on the figure.

PC-2 The commenter is correct that market conditions would determine the actual length of time required for completion of each proposed mining phase. This is because the rate of mining is determined by demand for the product, and each mining phase is not complete until the final topographical contours of the mined area are achieved: in other words, there is a pre-determined volume of materials that would be mined in each phase, but not a pre-determined rate at which mining would occur. Future market conditions cannot be determined; for this reason, a range of time is given for the completion of each mining phase.

PC-3 As stated in Chapter III, Project Description in the Draft EIR, the baseline level of production, which is based on an historic average, is 449,000 tons per year. The applicant is requesting an increase to a maximum of 1 million tons per year. This would more than double the baseline volume. The actual amount produced in any given year would be determined by market conditions.

PC-4 As stated on page III-2 of Chapter III, Project Description in the Draft EIR, under SMARA, each lead agency must adopt a surface mining ordinance which establishes procedures for the review and approval of reclamation plans and financial assurances, and for issuance of permits to conduct surface mining operations (Public Resources Code §2774). San Mateo County has adopted the required ordinance and it is codified as Division VI, Part 4, Chapter 3 of the San Mateo County Code.

PC-5 The EIR is limited to an analysis of the impacts of the Project as proposed, and also cumulative effects of the Project with other related, past, present and foreseeable future projects. The EIR preparers have conducted CEQA review of numerous surface mining operations throughout California, and bring this experience to bear on the current analysis.

PC-6 The County's Surface Mining and Reclamation Ordinance (SMARO) requires renewal of all surface mining permits every five years. The EIR analyzes the potential environmental effects of all proposed future mining and reclamation of the Pilarcitos Quarry. Any deviation from the mining and reclamation plan would require the applicant to submit an application to the County for a reclamation plan amendment, which may also require additional environmental review pursuant to CEQA. The level of CEQA analysis (e.g., a Subsequent EIR or Supplemental EIR) would be determined by the County at the time the applicant submits such an application.

0 2000

Feet
(approximate scale and direction)

SOURCE: San Mateo County Planning Division

Pilarcitos Quarry EIR . 205280

Figure IV-1
Nuff Creek Canyon, 1956

Note, as well, that numerous mitigation measures in the EIR require the applicant to submit, and the County to review and approve, detailed plans for each mining phase.

PC-7 The applicant's proposal calls for phased reclamation of the site, as well as phased mining; each mining area would be reclaimed as mining is completed, or earlier.

PC-8 The County's SMARO, Section 7703.4, details the requirements for financial assurances, including the types of financial instruments that may be used, the professional qualifications for preparing cost estimates for financial assurances, what is to be included in the financial assurances, the requirement for review and approval by the County and the State Office of Mine Reclamation, and the requirement to update cost estimates and financial assurances annually.

PC-9 Impact F.6, in Section IV.F, Air Quality and Greenhouse Gases, identifies an increase in carbon emissions as a significant effect of the proposed Project. Mitigation Measure F.6a requires the applicant to become a reporting member of The Climate Registry, and to submit annually a third-party verified greenhouse gas inventory. Mitigation Measure F.6b requires the applicant to reduce greenhouse gas emissions to the extent feasible, and to offset emissions that cannot be reduced. The measure allows the applicant to develop on-site offset projects, such as renewable energy projects; to contribute to the funding of local or regional offset projects (subject to review and approval by the County); or to purchase carbon offset credits. Only carbon offset credits that are verified and registered with the Climate Action Reserve, or available through a County-approved local greenhouse gas mitigation bank or fund, may be used to offset Project emissions. A detailed discussion of carbon offset credits begins on page IV.F-9 of the Draft EIR.

CHAPTER V
Revisions to the Draft EIR

The following revisions are made to the Draft EIR and incorporated as part of the Final EIR. Revised or new language is underlined. Deleted language is indicated by ~~strikethrough~~ text. Text and figure changes have been made in response to comments received on the Draft EIR (see Chapter IV, Comments on the Draft EIR and Responses to Comments), to new information received since publication of the Draft EIR (see Chapter II, New Information), or to correct errata discovered in the Draft EIR.

A. Revisions to Chapter III, Project Description

Page III-3 of the Draft EIR, first full paragraph, last sentence is revised as follows:

> The property includes Assessor's Parcel Numbers 048-340-080, 048-350-020 ~~048-350-030~~, 048-350-070, 056-340-040, and 056-380-030 (see Figure III-2a: ~~Ownership~~ Parcel Map of Project Site, and Figure III-2b: Parcel Map of Surrounding Properties).

Page III-5 of the Draft EIR, Figure III-2 (Ownership Map) is deleted and replaced with Figure III-2a (Parcel Map of the Project Site) and Figure III-2b (Parcel Map of Surrounding Properties), as shown on the following pages.

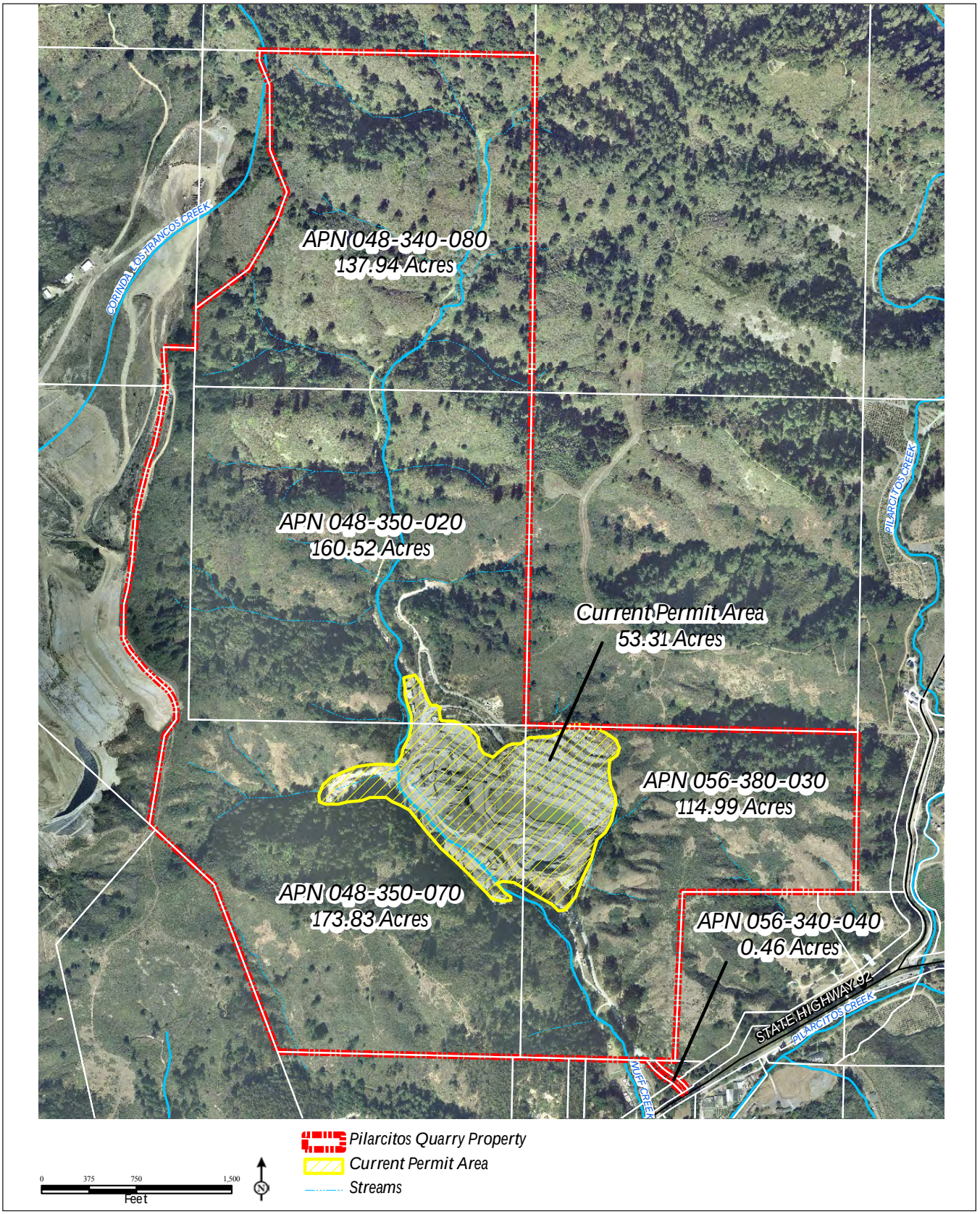
Page III-8 of the Draft EIR, second full paragraph, first sentence, is revised as follows:

> The Pilarcitos Quarry is an ongoing side-hill mining operation that currently produces fill material, asphaltic concrete aggregate, landscape materials, and various grades of sand, drain rock, and road base from an extensive granite deposit. Quarrying and processing directly affect approximately 53 acres of the 588-acre site (see existing mine and processing area in Figure III-5~~4.: Existing Mine and Processing Area~~).

Page III-9 of the Draft EIR, Figure III-4 (Existing Mine and Processing Area) is deleted.

Page III-12 of the Draft EIR, under the heading, "Water Supply and Use," the two paragraphs are revised as follows:

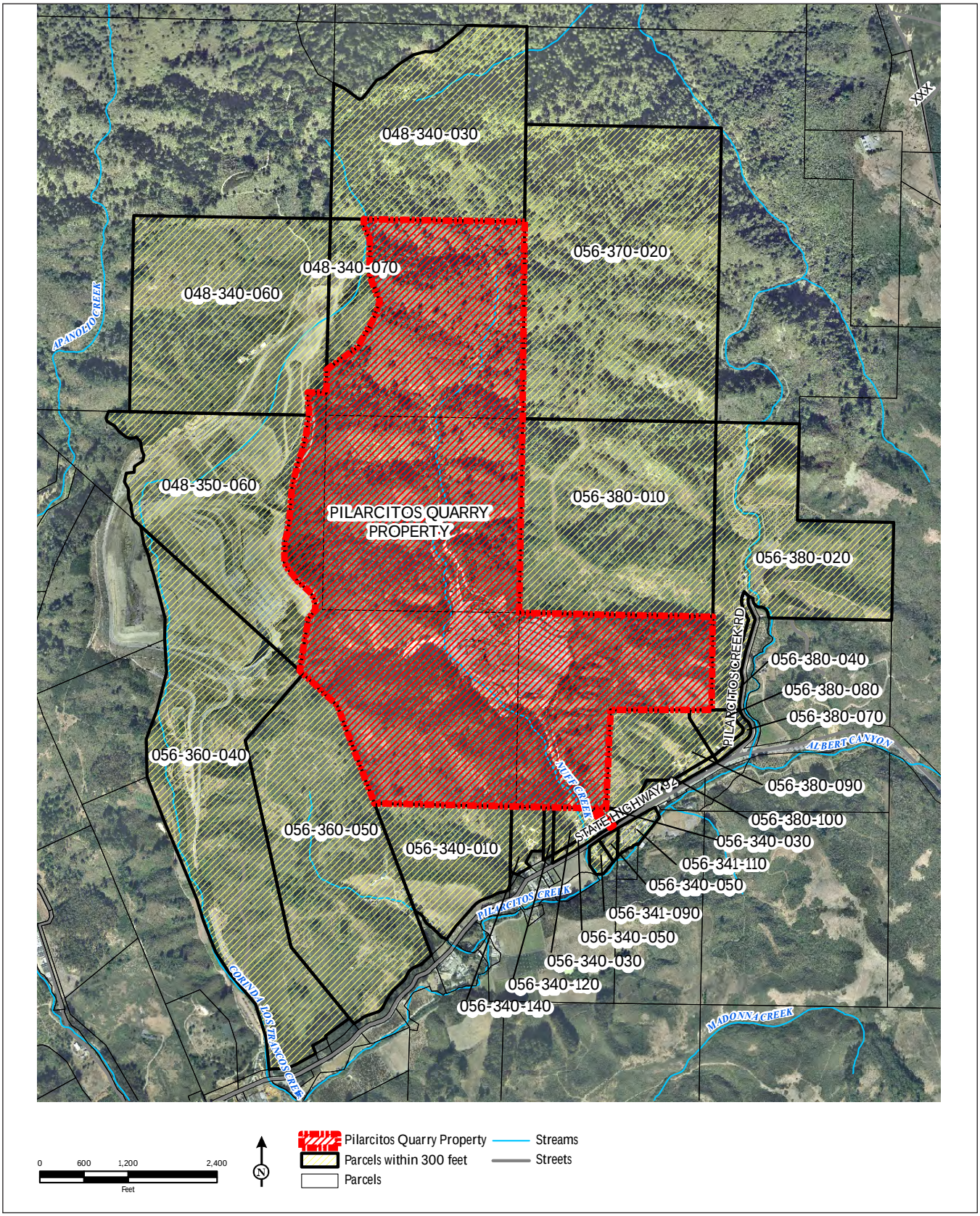
> An on-site well located southeast of the maintenance shed building, producing about 35 gallons per minute (gpm), is used as the principal source of water for drinking and restrooms at the quarry office and the residence south of the office building; and can provide supplemental water for ~~and~~ dust control at the processing plant. The well is



Pilarcitos Quarry EIR . 205280

SOURCE: LSA Associates, Inc.

Figure III-2a
Parcel Map of the Project Site



Pilarcitos Quarry EIR . 205280

SOURCE: LSA Associates, Inc.

Figure III-2b
Parcel Map of Surrounding Properties

located more than 100 feet from Nuff Creek. Well water is pumped into storage tanks and is drawn from the tanks through a simple pipe system as needed. The quarry's main water source for processing operations comes from water stored during the rainy season in the retired mining pit; water is pumped to the processing plant and back to the retired mining pit. Maximum water use occurs during summer months when the harvested rock, stored aggregate, and haul roads tend to dry out. Water sprays at transfer points in the crushing, screening, and conveying processes utilize up to 1,000 gallons per day. Approximately 11,000 gallons per day is used to wet down loaded haul trucks and to supply the water truck that sprays the aggregate storage piles and the access roads.

~~Water used in the aggregate washing process is continuously recycled through the plant. Sediment removed by the wash process is transported through a slurry pipe to holding ponds for drying. Five percent or less of the process water is lost through evaporation, depending on the time of year. Water may also be pumped from the sediment pond system and from a second on-site well, generating about 100 gpm, located southeast of the process plant. When water is needed from the well, it is pumped into the sediment pond system at night, and then directly into the wash plant during daytime operations.~~

Page 3-17, first paragraph, and Table III-1 of the Draft EIR are revised as follows:

F. Project Characteristics

The Project applicant has requested approval of a proposed Mining and Reclamation Plan for mining and reclamation over the next approximate 100 years, under which active mining would occur on an additional approximate ~~117~~ 107.4 acres of the property located near to—and north, east, and west of—the existing permitted quarry area (see **Figure III-5: Mining Plan**). **Table III-1**, ~~below~~ presents a summary of the proposed use of ~~areas within~~ the entire mining property.

~~TABLE III-1~~
~~SUMMARY OF USES OF AREAS WITHIN PROJECT SITE~~

~~Description~~	~~Area (acres)~~
~~Area of Current On-Going Quarry Operation~~	~~53.31~~
~~Proposed Addition Subject to Mining~~	~~116.91~~
~~Proposed Conservation Easement not Subject to Mining~~	~~210.00~~
~~Ridges and Habitat Areas not Subject to Mining (Estimated)~~	~~207.52~~
~~***Total Property Area***~~	~~***587.74***~~

~~SOURCE: LSA, 2009~~

TABLE III-1
SUMMARY OF PROPOSED USES WITHIN PROJECT SITE

Description	Area (acres)
Area of Current On-Going Quarry Operation	53.31
Area H (Approved Mining Expansion Area)	7.36
Proposed Addition Subject to Mining	107.4
Established Conservation Easement not Subject to Mining	192.5
Ridges and Habitat Areas not Subject to Mining (Estimated)	227.17
Total Property Area	***587.74***

Page III-17 of the Draft EIR, last paragraph, second and third sentences, is revised as follows:

> The expansion area is estimated to contain approximately 62 million tons of material, of which approximately 56 ~~50~~ million tons of net saleable aggregate reserves would be produced. In addition, approximately 6.2 ~~5.6~~ million tons of excavated intermixed sediments, as well as approximately 300,000 tons of excavated surface topsoil, would be salvaged and used in site reclamation.

Page III-18 of the Draft EIR, Table III-2 is revised as follows:

TABLE III-2
ANTICIPATED QUANTITIES OF MATERIALS

Mining Area	Total Extracted Material (tons)	~~Recovered Material 90% of Total~~[a] (~~tons~~)	Overburden (topsoil) (tons)	Washed Fines (10%) (tons)	Net Saleable Aggregate (tons)
Area H	1,087,429	~~978,686~~	165,758	108,743 ~~97,869~~	812,928 ~~715,060~~
Area J	1,425,045	~~1,282,541~~	11,604	142,505 ~~128,254~~	1,270,937 ~~1,142,683~~
Areas A & B	58,719,270	~~52,847,343~~	121,750	5,871,927 ~~5,284,734~~	52,725,593 ~~47,440,859~~
Reclamation Activities	1,092,353	~~983,118~~	0	109.235 ~~98,312~~	983,118 ~~884,806~~
Total Property Area	***62,324,097***	***~~56,091,687~~***	***299,112***	***6,232,410*** ***~~5,609,169~~***	***55,792,575*** ***~~50,183,407~~***

[a] ~~The difference between the extracted and recovered material in the table is not a source of additional material but a difference between the volume predicted in engineering calculations versus the volume actually expected to be extracted, based on the experience of the applicant.~~

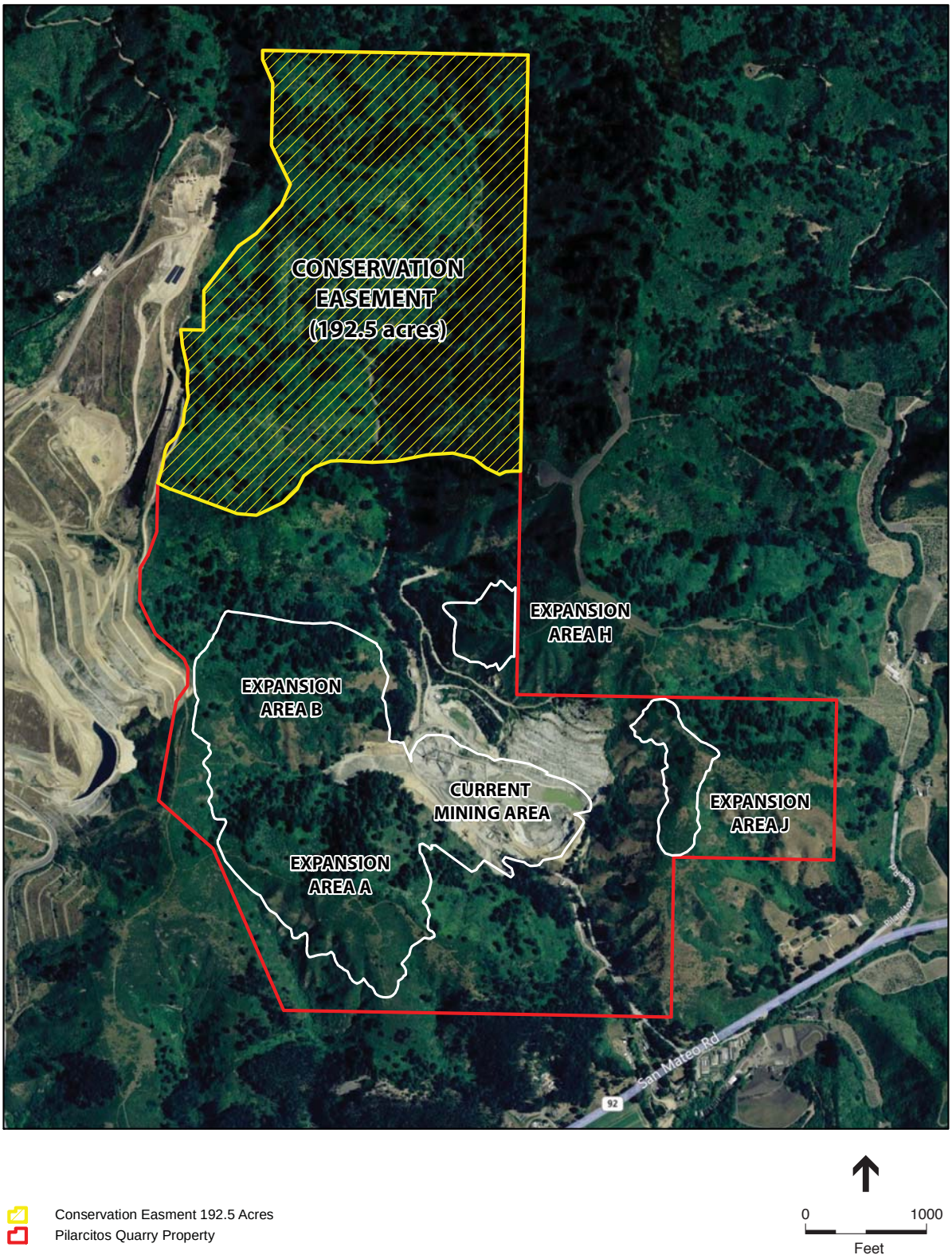
SOURCE: LSA, 2009

Page III-35 of Chapter III, Project Description, of the Draft EIR is revised as follows:

> Decisions regarding use of the stored water would be made by ~~the Pilarcitos Creek Restoration Workgroup and incorporated into its integrated Watershed Management~~ a stakeholder group convened by the applicant for this purpose. ~~, or by applicable regulatory agencies, such as the National Oceanic and Atmospheric Administration, the National Marine Fisheries Service, or California Department of Fish and Game.~~ The discharge structure would be designed to take water from the deeper portions of the storage pond, providing colder water temperatures.

Page III-38 of the Draft EIR is revised as follows:

> A ~~210-acre conservation easement is proposed for the northern portion of the quarry property, outside of the proposed expansion areas (see **Figure III-19**).~~ 192.5-acre conservation easement has been established in the northern portion of the quarry property, outside of the existing operations area and expansion areas (see Figure III-19). This conservation easement was established specifically to mitigate the impacts of the Area H expansion, which was approved by the County in March, 2011, as well as ongoing impacts of quarry operation. This portion of the quarry property contains most of the upper Nuff Creek watershed and extensive habitat for many native species including most of the species that would be covered in the HCP. The ~~proposed~~ conservation easement ~~would~~ preserves in perpetuity extensive areas of native vegetation in the upper watershed. Native vegetation in the upper watershed facilitates groundwater recharge and contributes to perennial flows in Nuff Creek from winter precipitation as well as summer fog-drip. ~~This would provide a reliable water source for the proposed water storage features in the active quarry and benefit downstream aquatic habitat in the Pilarcitos Creek drainage, including habitat for steelhead, California red-legged frogs, and other native aquatic species.~~
>
> As part of the Project, the applicant proposes to mitigate additional lands disturbed by mining activity by adding additional undisturbed or reclaimed land to the existing conservation easement. The applicant proposes to add three acres of land to the conservation easement for each acre disturbed (a 3:1 mitigation ratio). This mitigation ratio was developed in consultation with USFWS. Since future mining outside of Area H would disturb an additional 107.4 acres, the applicant would eventually add roughly 322 acres to the existing 192.5-acre conservation easement, for a total of approximately 514.5 acres, out of the total 588-acre ownership. The applicant assumes that, after the conclusion of site reclamation, the entire property would be placed under a conservation easement. The particular areas to be added to the conservation easement prior to each mining phase would be agreed upon through consultation with USFWS.



SOURCE: Benchmark Resources

Pilarcitos Quarry EIR . 205280

Figure III-19
Conservation Easement Boundary

B. Revisions to Chapter IV, Environmental Setting, Impacts and Mitigation Measures

Page IV.A-1 of the Draft EIR, second paragraph, fifth sentence is revised as follows

> The site is located roughly ~~2.5~~ two miles east ~~east~~ of the City of Half Moon Bay in unincorporated San Mateo County. (northwest of HMB would put it in the ocean)

Page IV.A-17 of the Draft EIR, Impact A.1 is revised as follows:

> **Impact A.1: The Project would not be consistent with certain County land use policies adopted for the purpose of avoiding or mitigating environmental effects. This would be a less than significant impact.**
>
> CEQA *Guidelines* Section 15125(d) requires that an EIR discuss any inconsistencies between the proposed Project and applicable general plans and regional plans. For purposes of this EIR, an apparent inconsistency of the Project with a policy reflected in the County's ~~general~~ General ~~plan~~Plan, Local Coastal Program (LCP), and other pertinent plans would not, in and of itself, constitute a significant impact on the environment. Rather, the policies of these plans are used as sources of criteria where applicable for assessing potential environmental effects identified throughout this EIR. Ultimately, the San Mateo County Planning and Building Department will make recommendations to the San Mateo County Planning Commission and Board of Supervisors regarding the consistency of the Project with the County General Plan and LCP and the Project site's suitability for the proposed use.
>
> The General Plan's general land use element designation of "General Open Space" for the Project site encourages resource management and production uses, which would include permitted surface mining operations. Furthermore, the General Plan's rural land use element allows for the careful management and enhancement of extraction of mineral resources in rural areas. Consistent with the compatible land use policy of the rural land use element, the proposed Project would largely protect surrounding land uses from Project noise and partially, visual effects, of quarry operations through maintaining the existing location of aggregate processing equipment within the Project site, and through topographic and vegetative screening. Also consistent with the development standards policy of the rural land use element, the Project proposes reclamation of land on the site that is proposed to be mined.
>
> The Project site is located within the Resource Management/Coastal Zone/Coastal Development zoning district. Quarries are an allowable use in the Resource Management zoning district with issuance of a use permit (in this case, a Surface Mining Permit). The Surface Mining Permit would have a 5-year term, and would be subject to County review and consideration of extension each five years. The Coastal Development District overlay allows mining on the Project site with ~~the either~~ the issuance of a Coastal Development Permit demonstrating conformance with LCP plans, policies, requirements and standards; or alternatively, the issuance of an exemption from Coastal Permit requirements.
>
> As described in Chapter III, Project Description, the Project as proposed incorporates a number of design and operational features to maintain consistency with LCP policies and avoid and/or minimize potential adverse environmental effects. As stated in Impact D.12

in the Biological Resources section of this EIR, County staff have determined that the Project is consistent with LCP policies protecting sensitive habitat.

With respect to visual resources, as discussed in ~~Impacts I.1 and I.2 in~~ the Aesthetics section of the EIR, given the size of the Project, and the long term duration of the mining involved, the project will have a significant impact upon visual resources. ~~and the substantial permanent topographic and vegetative alteration of the site that would occur, it may be unavoidable for the Project to conflict with certain LCP visual resource policies, for impacting public views and preserving the visual and open space quality of the site (see Policy 8.5), removal of trees in scenic corridors (Policy 8.9), and alterations in landform (Policy 8.17).~~

However, Staff's analysis has determined that the proposed project and its location are the least impactful, per Policy 8.5 of the LCP, for achieving the Project's goals. An alternative to the proposed Project would be scatter mining locations throughout the project site, thus avoiding direct impacts upon Environmentally Sensitive Habitat Areas and potentially reducing impacts to visual resources as viewed from outside of the project site. However, this alternative would have a significant and unavoidable impact upon biotic and hydrologic resources on the site. It would also conflict with an adopted Habitat Conservation Area, which encompasses the upper half of the project site. The Project design and location also best preserves the open space qualities of the site by clustering development near already disturbed areas. Specifically, the Ox Mountain Landfill (which is visible from Hwy. 1 and Skyline Blvd.) is adjacent to the Project, as well as previously disturbed areas within the Project site itself. In addition to clustering development and preserving a majority of the site as open space, the Project will also best protect overall coastal resources by creating new or enhanced wetland and riparian habitat within the canyon and the creation of water storage reservoirs to enhance aquatic habitat within Pilarcitos Creek. Also, by maintaining a local source of aggregate materials within the coastal zone, the project will reduce potential Greenhouse Gas (GHG) emissions within the coastal zone, because haul trucks will not have to travel from outside the coastal zone to deliver aggregates.

When taking into account these additional issues, Staff has determined that the project best preserves the visual and open space qualities of the project site overall as provided by the balancing provisions of Policy 8.5 of the LCP. As such, Staff has determined that the project is not in conflict with visual resources policies as contained in the LCP.

The Project site is not defined as agricultural land under the LCP, and therefore the Project as proposed does not appear to conflict with LCP policies for maintaining or keeping prime agricultural land, or other land suitable for agriculture, in agricultural production.

The County SMARO requires mining operations to have a surface mining use permit (or vested right), reclamation plan, and financial assurance approved prior to commencing mining operations. These requirements would be met by imposing conditions of approval of the Project that require compliance with the operational and reclamation standards of the SMARO.

~~The Project site is not located within the area of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.~~ The Project is located within the boundaries of the Pilarcitos Creek

watershed, and provisions of the Pilarcitos Creek Integrated Watershed Management Plan (IWMP) pertain to the Project site, although this plan is not an adopted habitat conservation plan. The plan is a document prepared by the San Mateo County Resource Conservation District, which functions independent of County government and derives its power from state law; the plan does not represent County policy. Still, the proposed Mining and Reclamation Plan, which provides for the continued maintenance of on-site sediment detention basins and replanting of native tree species to aid in bank stabilization, would substantially comply with the goals of the IWMP.

All potential significant physical environmental effects of the proposed Project are addressed in their respective sections of this EIR. Measures are proposed either as part of the Project and/or as identified throughout this EIR to minimize and mitigate adverse environmental effects of the Project to the extent feasible.

~~In sum, the Project is consistent with applicable land use policies, with the exception of LCP visual resource policies. Conflict with these policies would be a significant impact.~~

~~Mitigation Measures Proposed as Part of the Program~~

~~None.~~

~~Mitigation Measures Identified in this Report~~

~~No additional mitigation available beyond that identified elsewhere in this report.~~

~~Level of Significance after Mitigation~~

~~The conflict with LCP visual resource policies would remain significant and unavoidable, even after application of mitigation measures identified elsewhere in this report.~~

Page IV.B-4 of the Draft EIR is revised as follows:

Artificial Fills and Disturbed Soils

Artificial fills refer to soil and rock materials—usually specially-designed mixtures of subsoil and rock—that are used to level an area to construct roadways or structures. Artificial fill can also be placed in an unengineered, haphazard manner as drainage fills or as a result of initial site clearing~~. In the Project area, artificial fills are most likely derived from washed fines generated during the mining process and are used in the construction of berms, as road fill, and to created level areas for process and storage facilities.~~ Artificial fills and disturbed soils underlie the majority of the active mining area and associated processing and storage facilities.

Pages IV.B-31 and 32 of the Draft EIR, Impact B.6, are revised as follows:

Impact B.6: The proposed water storage features could be subject to displacement waves during a large regional earthquake, either via seiche or landslide originating outside the boundaries of the proposed mining pits. These waves could overtop the retaining features and cause flooding within the quarry or downstream. This would be a significant impact.

Over the course of the proposed mining phases, several large water storage features are proposed, the largest of which would be the reservoir created in the large mining pits that would combine mining areas A and B. This would be a permanent feature following reclamation. It would have a surface area of approximately 35 acres ~~(?)~~, would be a maximum of 175 feet deep, and would have a storage capacity of over 4,800 acre feet. The water surface would be above the elevation Nuff Creek, and located directly adjacent to the creek. The other water storage features are temporary and smaller. All of the water storage features would have quarried slopes above them, some to heights of several hundred feet above the water level.

An earthquake or landslide from the slopes surrounding a water storage feature could induce a seiche or a displacement wave, which would have the potential to overwhelm the dam and spillway facility (for Phase II of the mining plan), the earthen or bedrock berms (for Phases II, III and IV of the mining plan), or the terrain divide between the permanent reservoir and Nuff Creek (Phase V of the mining plan). Failure of the bedrock berm(s) ~~Dam failure~~ could occur.

The volume and height of the displaced water would depend on the causative landslide (or earthquake) and the characteristics of the water storage pond. ~~Dam~~ O~~o~~vertopping would be of most concern during active mining operations when mine personnel and equipment would be present, but could also have adverse impacts to water quality and sedimentation of Nuff Creek and Pilarcitos Creek if such an event occurred following reclamation. A very large overtopping or containment ~~dam~~ failure could result in catastrophic flooding downstream, including along State Route 92 and populated and cultivated areas in the Pilarcitos Creek Valley. Design details for the water storage pond in Phase II of the mining plan indicate the flood overflow tower would be sized to accommodate a 500-year peak flow event. Whether this is sufficient to accommodate landslide-induced displacement waves is not known. Further, the mining and reclamation plan does not provide details on the design and engineering standards for the various water storage features ~~earthen berms~~ to be constructed for the Project between Phases II and IV of the mining plan. Because many phases of the mining plan leave upland areas intact, and because those areas are susceptible to earth flows during heavy winter rains and earthquakes, the mining plan results in a potentially hazardous condition if the water storage features are not properly designed. This would be a significant impact.

As discussed in the regulatory setting, the DSOD would be required to approve any dam 25 feet or more in height or with an impounding capacity of 50 acre feet or more. This would include all of the water storage ponds and associated dams shown in Figures III-7 through III-9 of Chapter III, Project Description. DSOD would be required to approve the design of the regulated dam and would perform periodic inspections (typically once a year) to insure the safety of the dam structure. In addition, the applicant shall implement Mitigation Measure B.6**,** which calls for the establishment of adequate bedrock freeboard, design standards for earthen berms (including seismic design), and spillway criteria to handle sudden water surcharge introductions. The mitigation measures previously discussed under Impacts B.1 through B.4 ensure that quarry slopes and earthen berms maintain adequate stability; however, the mitigation measures would not prevent the water features from experiencing a seiche or an earth flow originating from outside the boundaries of the mining pits, requiring additional mitigation, as specified below.

Page IV.B-33 of the Draft EIR, third paragraph, second to last sentence is revised as follows:

An estimated 6.2~~5.6~~ million tons or 4.1~~3.7~~ million cubic yards of intermixed sediments would be washed from the gross mineral resource and used as fill in the mining pits and create the final reclamation grading for the quarry floor.

Page IV.C-11 of the Draft EIR, first paragraph under "Groundwater Quality," is revised as follows:

BHI collected groundwater samples from the Streamside Well and the Sediment Pond Well during the field investigation in October 2006. The groundwater samples were analyzed for the same constituents as the surface water samples. The results indicate that groundwater collected from the Streamside Well is similar to surface waters: a calcium bicarbonate water of relatively low specific conductance, quite typical of the Montara

Mountain granitic aquifers (BHI, 2010). The groundwater sample collected from the southern well near the sediment pond has a different ionic balance. It appears to be relatively rich in sodium relative to calcium and magnesium. Other minerals, including calcium and bicarbonate, are also low in this sample relative to the other water samples, including calcium and bicarbonate, and the pH is elevated. ~~These results suggest that the ion balance in groundwater beneath the pond may be altered from the flocculent used to settle solids in the ponds. Conceivably, the flocculent may also account for the moderate levels of boron and fluoride and detected levels of zinc in this sample. However, these elements, in combination, often occur in deep waters emanating upward through regional fracture or faulting systems, which may not reflect other geologic or landfill influences. This is plausible given that the Pilarcitos fault is about a mile northeast of the site and the well is deep enough to possibly intersect deep joints in the bedrock~~ (BHI, 2010).

Page IV.C-28 of the Draft EIR, last paragraph above "Level of Significance after Mitigation," is revised as follows:

> If the applicant fails to obtain a permit to divert and store water from Nuff Creek, or if the Water System Operation and Management Plan fails to demonstrate that baseflows can be maintained by releasing water from a water storage facility, or if the Periodic Hydraulic Report indicates that future mining will result in a statistically significant reduction in baseflows that, after consultation with the RWQCB, is determined to adversely affect baseflows, then the applicant shall cease mining in the area determined to be adversely affecting baseflows, and shall prepare an application to amend its Mining and Reclamation Plan to avoid creation of a groundwater gradient from Nuff Creek into an adjoining mining pit or water storage facility. This may include modification of the final grading plan to avoid creating a deep pit in close proximity to the creek. Such a modification of the Mining and Reclamation Plan may be subject to additional environmental review under CEQA and County approval.

The following revisions are made to page IV.D-7 of the Draft EIR:

> Arroyo willow thickets are present throughout the study area. Arroyo willow occurs relatively sparingly along Nuff Creek, but it is the dominant tree along some tributaries, co-occurring with Douglas fir on north-facing slopes. Several large stands of willow are also present on the south and east facing slopes. Some of the thickets are associated with observed wetland hydrology and hydrophytic plants such as Chamisso's hedge nettle and stinging nettle. Other stands occur on drier slopes and are not associated with visible seeps or other wetland conditions. The understory in these stands consists of plants associated with upland vegetation, including bush monkey‐flower and yerba Buena (*Satureja douglasii*). These drier site willow thickets were termed by LSA (2004) as "problem areas" with respect to determining their regulatory status under the Corps Section 404 regulatory program and under the Local Coastal Program.

In addition, the following information is added to the Sensitive Natural Communities discussion on Page IV.D-10, at the end of the third full paragraph, last sentence:

Under the California Coastal Act and San Mateo County LCP, sensitive communities are referred to as environmentally sensitive habitat areas (ESHAs). There are approximately 151 acres of ~~wetland~~ ESHAs within the quarry property ~~proposed expansion area~~, including perennial and intermittent creeks (Nuff Creek and its tributaries), riparian areas bordering these creeks, and wetlands (all of which are described above) and defined buffer areas. LSA biologists identified and mapped these ~~wetland~~ ESHAs ~~throughout the Project area~~ (**Figure IV.D-3**) (LSA, 2008), ~~.~~ including several arroyo willow thickets on drier slopes (labeled as Problems Areas on Figure IV.D-3) which lacked any evidence of wetland hydrology or soils and which were not included as wetlands by the Corps (see verified Corps jurisdictional map, Figure IV.D-2).

Page IV.D-17 of the Draft EIR is revised as follows:

San Francisco garter snake (*Thamnophis sirtalis tetrataenia*). The San Francisco garter snake (SFGS) is a federal and state Endangered species, and a California Fully Protected species under Section 5050 of the CDFG Code. A Fully Protected species may not be taken or possessed at any time, except ~~possibly for necessary scientific research.~~ as authorized by CDFG for necessary scientific research, including efforts to recover Fully Protected species.

Impact D.2 on page IV.D-38 of the Draft EIR is revised as follows:

The CRLF is a federally Threatened species. The applicant has already obtained ~~, and therefore the Project applicant must obtain~~ an Incidental Take Permit (ITP) from the USFWS as required by the FESA, covering existing operations and the expansion of mining into Area H. ~~prior to certification of this EIR~~ Prior to issuance of any County permits which could result in ground-disturbing activities within proposed expansion areas A+B and J, the applicant must obtain ITP coverage for these areas and activities.

Mitigation Measure D.2e on page IV.D-43 of the Draft EIR is revised as follows:

Mitigation Measure D.2e: *Exclusion Fencing.* ~~An exclusion fence constructed out of three quarter-inch plywood or aluminum will be installed around the perimeter of every active quarry area and will have one-funnel trap doors placed at various locations to allow snakes within the active quarry area to escape but not enter. The fence will be built with two-foot-wide boards bolted together, with the base buried six inches deep in the substrate. The fence will exclude potential dispersing CRLF and SFGS from the active quarry area and confine them to ESHAs, if they move through the Project site. (This measure was taken from LSA's 2007 Mitigation and Monitoring Plan Pilarcitos Quarry (Expansion Area 2) for expansion area H, but shall apply to all expansion areas).~~ A snake and frog-proof barrier shall be placed around the perimeter of each mining expansion area prior to ground disturbance. All fence designs and locations shall he provided to the Service for approval at least 10 working days prior to installation. All exclusion fencing shall be checked regularly and maintained in good working order.

Figure IV.E-1, and Figures IV.E-3 through IV.E-9, found at the end of this chapter, are revised to correctly label Intersection No. 4 (SR 92 and Canada Road) on the illustrations (incorrectly labeled as Intersection No. 2).

Mitigation Measure E.4b in Section IV.E, Transportation and Traffic in the Draft EIR, is modified as follows:

> **Mitigation Measure E.4b:** The Project applicant shall work with Caltrans to ensure that acceleration and deceleration lanes are installed along the Project access frontage. ~~as required under the existing operating permit. If funding is unavailable or construction would not occur before 2013, then the Project applicant would be responsible for all permit and installation costs.~~

Tables IV.F-6 and IV.F-7 in Section IV.F, Air Quality and Greenhouse Gases, are revised as shown below:

TABLE IV.F-6
ESTIMATED PROJECT MAXIMUM ANNUAL NET INCREASE IN ANNUAL AIR EMISSIONS (2011)

	Emissions (tons/year)				
Source	**NO_x**	**PM_{10}**	**ROG**	**$PM_{2.5}$[a]**	**CO**
Excavation Equipment Exhaust	3.99	0.19	0.48	0.17	2.19
Fugitive Dust from Excavation	_ _	0.47	_ _	0.09	_ _
Fugitive Dust From Blasting	_ _	0.05	_ _	0.01	_ _
Fugitive Dust from Mined Material Processing	_ _	4.77	_ _	0.35	_ _
Fugitive Dust from Recycled Aggregate, Concrete and Asphalt		1.48		0.12	
Truck Trips	9.92 ~~16.53~~	0.34 ~~0.56~~	0.98 ~~1.64~~	0.28 ~~0.46~~	10.24 ~~17.06~~
Worker Trips	0.02	<0.01	0.01	<0.01	0.22
Total	**13.93** ~~**30.5**~~	**7.3** ~~**7.52**~~	**1.47** ~~**2.13**~~	**1.02** ~~**1.20**~~	**12.65** ~~**19.3**~~
Threshold	10	15	10	10	None
Significant?	**Yes**	No	No	No	No

[a] Fugitive PM2.5 emissions are calculated based on PM10 emissions factors and URBEMIS Fugitive Dust calculations that reports that approximately 20 percent of PM10 from grading dust is in the form of PM2.5. Exhaust PM2.5 is based on EMFAC emission rates.

SOURCE: Environmental Science Associates, 2011 (Appendix E)

TABLE IV.F-7
ESTIMATED PROJECT MAXIMUM ~~DAILY~~ NET INCREASE IN ~~ANNUAL~~ DAILY AIR EMISSIONS (2011)

Source	Emissions (pounds/day)				
	NO_x	PM_{10}	ROG	$PM_{2.5}$[a]	CO
Excavation Equipment Exhaust	33.27	1.57	3.96	1.44	18.25
Fugitive Dust from Excavation	_ _	5.88	_ _	1.18	_ _
Fugitive Dust From Blasting	_ _	0.63	_ _	0.13	_ _
Fugitive Dust from Mined Material Processing	_ _	55.57	_ _	4.70	_ _
Fugitive Dust from Concrete Recycling		22.95		2.39	
Truck Trips[b]	0 ~~206.62~~	0 ~~6.98~~	0 ~~20.50~~	0 ~~5.77~~	0 ~~213.25~~
Worker Trips	0.13	0.02	0.05	0.01	1.81
Total	33.4 ~~240.02~~	86.62 ~~93.6~~	4.01 ~~24.51~~	9.85 ~~15.62~~	20.06 ~~233.31~~
Threshold	54	82	54	54	None
Significant?	No ~~**Yes**~~	**Yes**	No	No	No

[a] Fugitive $PM_{2.5}$ emissions are calculated based on PM_{10} emissions factors and URBEMIS Fugitive Dust calculations that reports that approximately 20 percent of PM_{10} from grading dust is in the form of $PM_{2.5}$. Exhaust $PM_{2.5}$ is based on EMFAC emission rates.
[b] As discussed in Section IV.E, Transportation and Traffic, the analysis assumes that there will be no increase in peak daily truck trips over existing baseline conditions; therefore, the Project would result in no incremental increase in daily air emissions from haul trucks.

SOURCE: Environmental Science Associates, 2011 (Appendix E)

The text of Impact F.1, on Page IV.F-24 of the Draft EIR, is revised as follows:

Estimated maximum daily Project emissions of criteria air pollutants are presented in **Table IV.F-7**. Estimates of maximum daily Project emissions were conservatively developed, assuming a 50 percent greater than the average daily emissions for all emissions except truck trips, based on ~~a root~~ annual throughput. As discussed in Section IV.E, Transportation and Traffic, the EIR analysis assumes no increase in peak daily haul truck traffic over baseline conditions. Therefore, there would be no increase in peak daily truck-related air emissions. As shown in Table IV.F-7, the estimated maximum daily ~~NOx and~~ PM_{10} Project emissions would exceed the BAAQMD daily thresholds.

Mitigation

General Discussion

The significant annual increase in ~~and maximum daily~~ emissions of NO_x generated by the Proposed Project is ~~are~~ primarily associated with on-site excavation equipment and off-site haul truck trips travelling to~~/~~ and from the quarry. Because the haul truck trips are independently generated by the quarry's clients, the applicant does not have control over the implementation of engineering controls on these trucks. Therefore, available feasible mitigation measures would consist of reducing NO_x emissions from off-road diesel equipment operated at the quarry. Emissions of NO_x calculated from off-road equipment

assumed standard diesel engines, as a conservative analysis, and did not consider recently available emissions control~~s~~ technologies~~y~~ for newer and forthcoming diesel engines. The significant maximum daily emissions of PM_{10} generated by the Proposed Project are primarily associated with fugitive dust from processing equipment, with a proportionally smaller amount associated with off-road equipment ~~the Project haul trucks~~.

Page IV.F-25 of the Draft EIR is revised as follows:

Mitigation Measure~~s~~ F.1a would reduce Project-related off-road equipment-generated NOx emissions by approximately 90 percent, from 3.99 ~~14.0~~ tons per year to about 0.4 ~~1.4~~ tons per year, for a reduction of about 3.6 ~~12.6~~ tons per year. Further, this measure would reduce existing operational emissions, which are estimated to be 1.73 tons per year (see Final EIR Appendix E, Table E-6), by approximately the same amount, for a net realized reduction in NOx emissions of approximately 5.1 ~~25.2~~ tons per year. This would reduce the net increase in NOx emissions to about 8.8 ~~5.3~~ tons per year, which would be less than~~t~~ the 10 ton per year significance threshold. Therefore, implementation of Mitigation Measure F.1a would reduce NOx emissions to a less-than-significant level.

Page IV.F-35 of the Draft EIR is revised as follows:

CO_2 and CH_4 emission rates for diesel trucks were calculated using the EMFAC2007 model, while the contribution of N_20 was estimated using emission factors of the California Climate Registry's (now The Climate Registry) general reporting protocol (CCAR, 2009). GHG emissions from annual increases in Project haul truck trips and passenger vehicles are estimated to be 1,303 ~~2,176~~ metric tons per year of CO_2e.

The last paragraph on page IV.F-36 of the Draft EIR is revised as follows:

Total Project GHG emissions are shown in **Table IV.F-15**. The total annual increase in GHG emissions is estimated to be 2,788 ~~3,649~~ MT of CO_2e per year. This would exceed the BAAQMD threshold of 1,100 MT of CO_2e per year by 1,688 ~~2,549~~ MT, and represent a significant contribution to global climate change.

Tables IV.F-15 in Section IV.F, Air Quality and Greenhouse Gases, are revised as shown below.

Page IV.H-1 of the Draft EIR, second paragraph, third sentence, is revised as follows:

Most of the hazardous materials handled in quantity on-site are located in the fuel containment center, the maintenance shop, the plant shop, ~~explosive magazines,~~ and the warehouse.

TABLE IV.F-15
ANNUAL INCREASE IN GREENHOUSE GAS EMISSIONS
(In Metric Tons per Year of Carbon Dioxide Equivalent [MT CO_2E])

	CO_2	CH_4	N_2O	Total
Fossil Fuel Combustion				
Off-road equipment	318	1	2	321
On-road: trucks and cars	1,303 ~~2,157~~	1 ~~2~~	10 ~~17~~	1,315 ~~2,176~~
Subtotal: Fossil Fuel Combustion	1,621 ~~2,475~~	2 ~~3~~	13 ~~19~~	1,636 ~~2,497~~
Electricity Use	254	0.3	0.8	255
Land Conversion				
Loss of sequestered organic carbon	161			161
Short-term loss of carbon sequestration potential	490			490
Long-term loss of carbon sequestration potential (100 years)	245			245
Subtotal: Land Conversion	897			897
Total	**2,772** **~~3,625~~**	**2**	**14** ~~20~~	**2,788** **~~3,649~~**
BAAQMD Significance Threshold				1,100
Amount over Threshold				1,688 ~~2,549~~

NOTE: Figures may not add correctly due to rounding

SOURCE: Environmental Science Associates, 2010, 2011 (Appendix E)

Page IV.H-11 of the Draft EIR, second to last paragraph is revised as follows:

> No explosives are stored at the quarry. ~~Explosives are stored on-site in a locked explosives magazine, which is accessed by the quarry's blasting contractor.~~ The blasting contractor delivers adequate quantities of explosives to the site on days when blasting is planned. All unused explosives and detonators are returned ~~to the on-site explosives magazine or~~ to the blasting contractor's secure off-site magazines at the end of each day that a blast occurs.

C. Revisions to Chapter VI, Alternatives to the Project

Page VI-3 of the Draft EIR is revised as follows:

Reduced Mining Area Alternative

Description

The Reduced Mining Area Alternative would limit expansion of the mining area to a modified Area A; see **Figure VI-1**. Proposed mining Areas B~~,~~ and J ~~and H~~ would not be mined, but rather, would be preserved in their existing condition. Mining would occur in Area H as already approved.

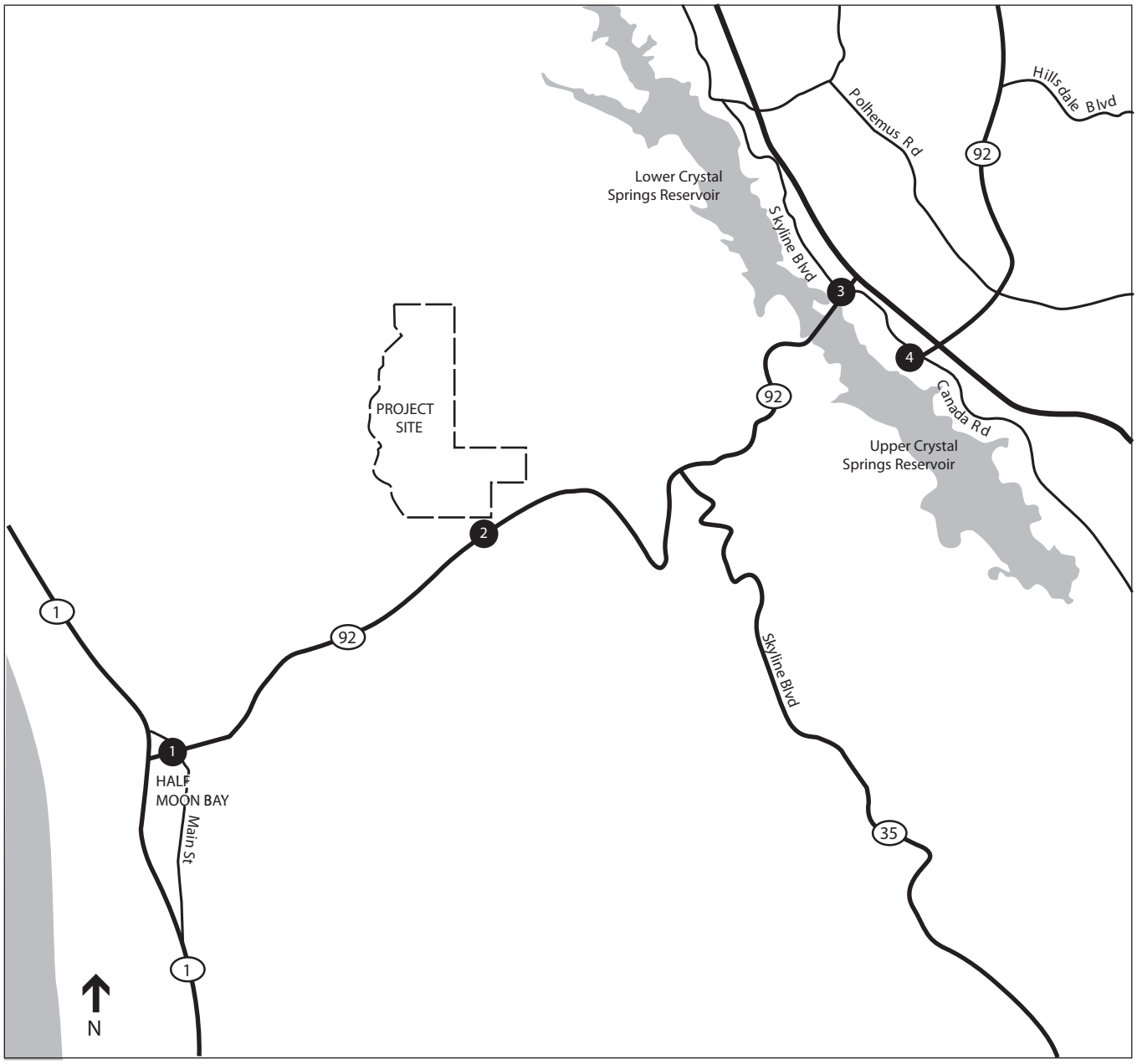
Page VI-5 of the Draft EIR is revised as follows:

As under the proposed Project, this alternative would ultimately provide water storage to be used for streamflow augmentation, on the conditions that background studies showed that this could be done without significant impact to water quality and biological resources, and that the applicant applies for and obtains water rights for diverting and storing water from Nuff Creek. While mining is occurring in modified mining Area A, high flows from Nuff Creek would be directed to a small interim water storage feature developed in Area I, as shown in Figure VI-1 (similar ~~but not necessarily identical~~ to the configuration and design proposed for the Project in Phase III ~~IV~~, however, in contrast to the Project, no temporary dam would be created along the southeast side of Area I). Upon completion of mining in modified mining Area A, the mining area would be filled with remaining overburden and fines, and then prepared to transition for use as water storage. Area I would be reclaimed as wetlands and open stream channel. Water would be released from the water storage facility to the restored creek to augment flows (as proposed under the Project); Area A slopes would also undergo final reclamation.

The final water storage facility in modified mining Area A under this alternative (which would have a tentatively estimated capacity of 1,100 acre feet) would be substantially smaller than that proposed under the Project for combined mining Areas A+B (approximately 4,800 acre feet). ~~The final configuration of modified mining Area A would be such that no dams would be created to support its final use as a water storage feature (in contrast to the proposed Project, which proposes to construct a permanent earthen dam along the east side of mining Area A by Phase V).~~

Page VI-12 of the Draft EIR, first paragraph, fifth sentence, is revised as follows:

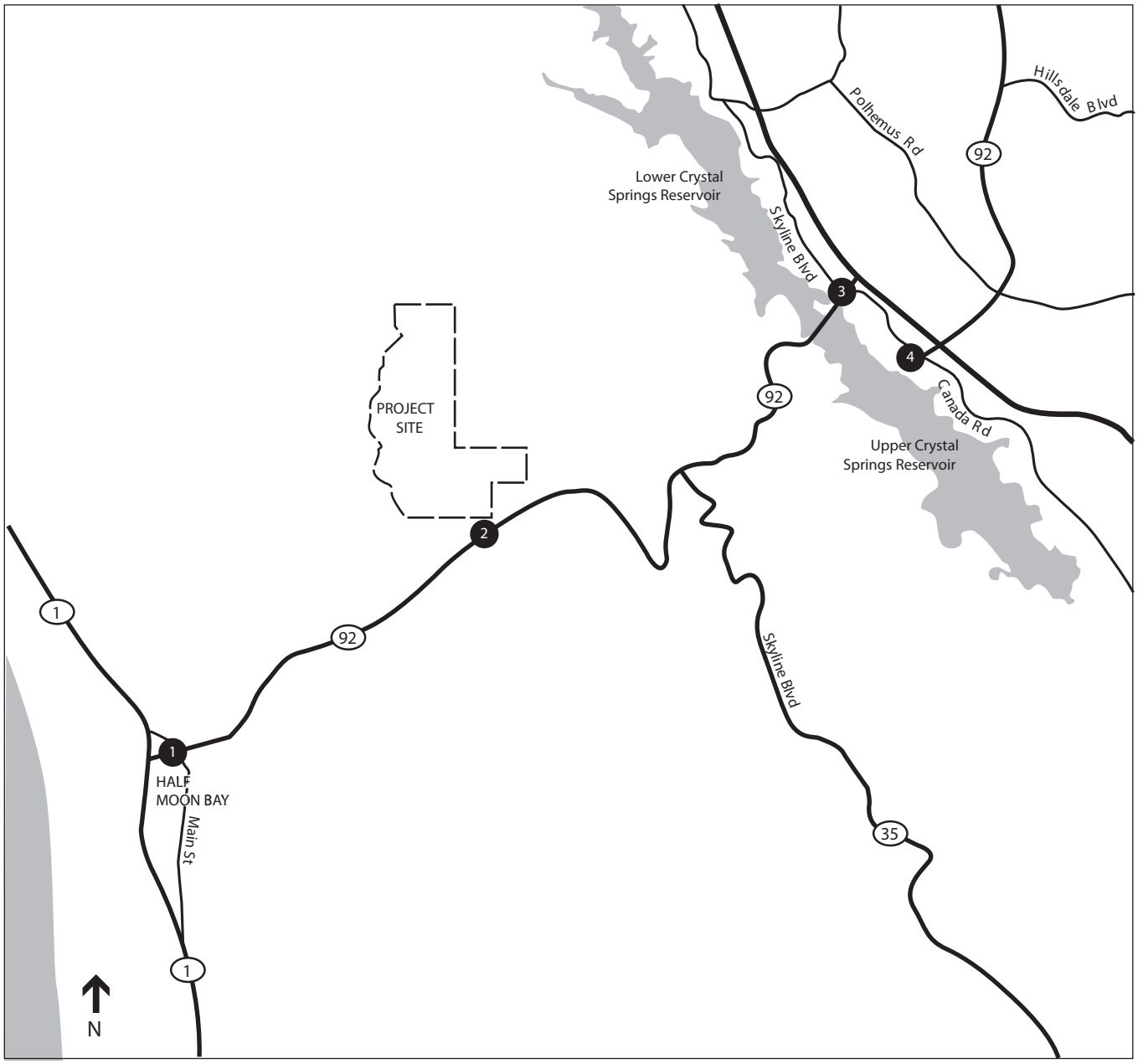
Overall potentially significant but mitigable seismic-induced risks (e.g., landslides, liquefaction, seiche) associated with this alternative would also be expected to be less than the Project, given that no earthen dam would be constructed for the interim water storage feature in Area I, and because of the substantially reduced final water storage volume within modified mining Area A.

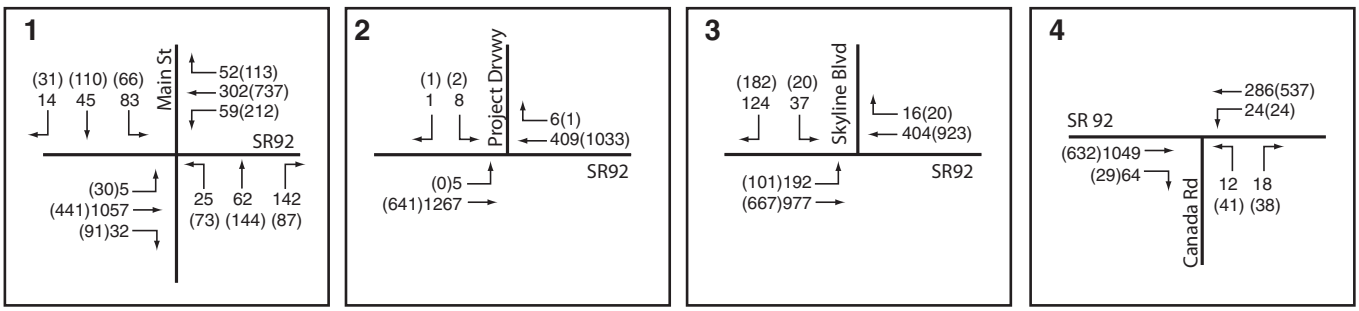


SOURCE: ESA

Pilarcitos Quarry EIR . 205280

Figure IV.E-1
Project Location and
Roadway Network



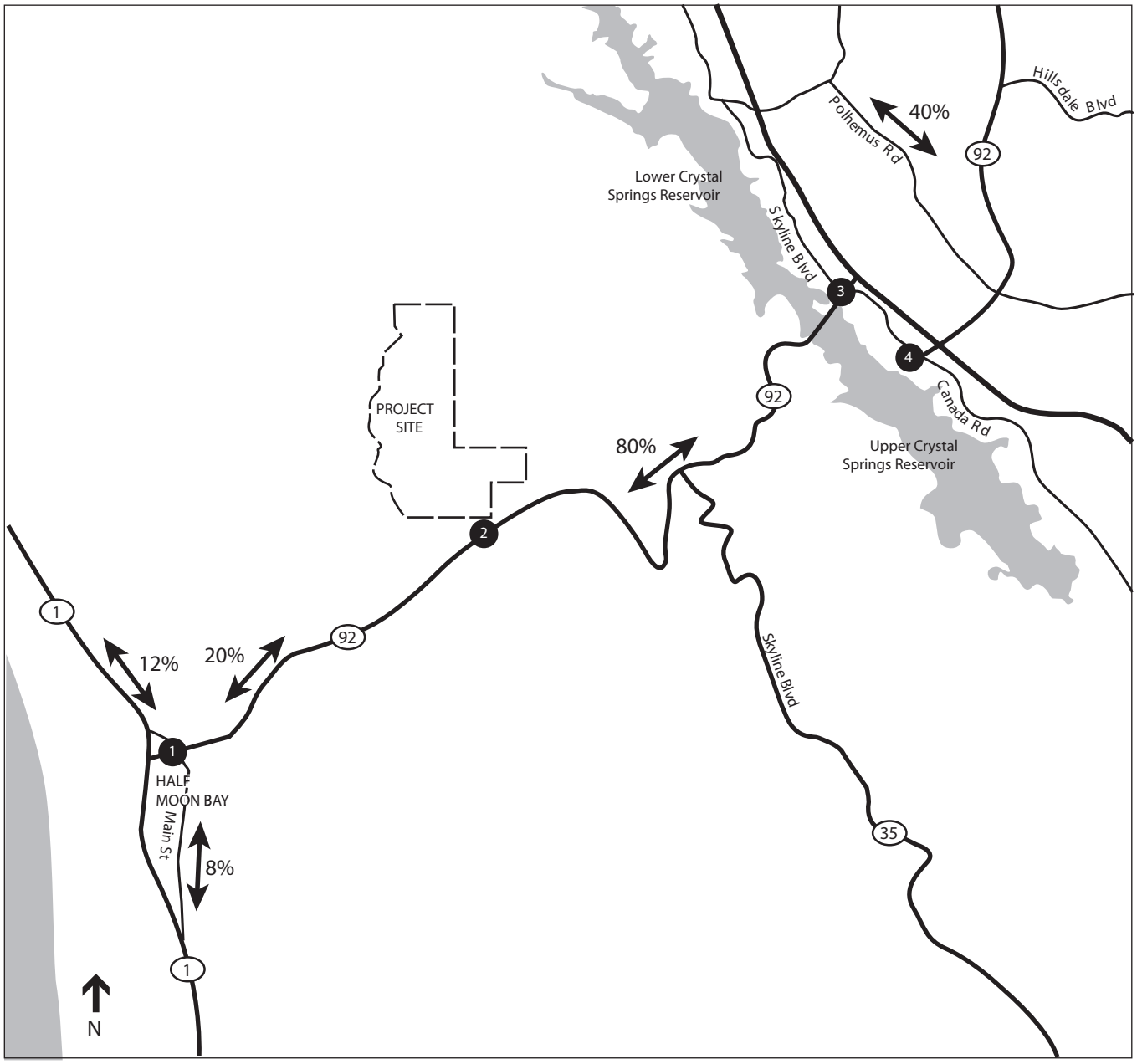


XX(XX) = AM(PM)

SOURCE: ESA

Pilarcitos Quarry EIR . 205280

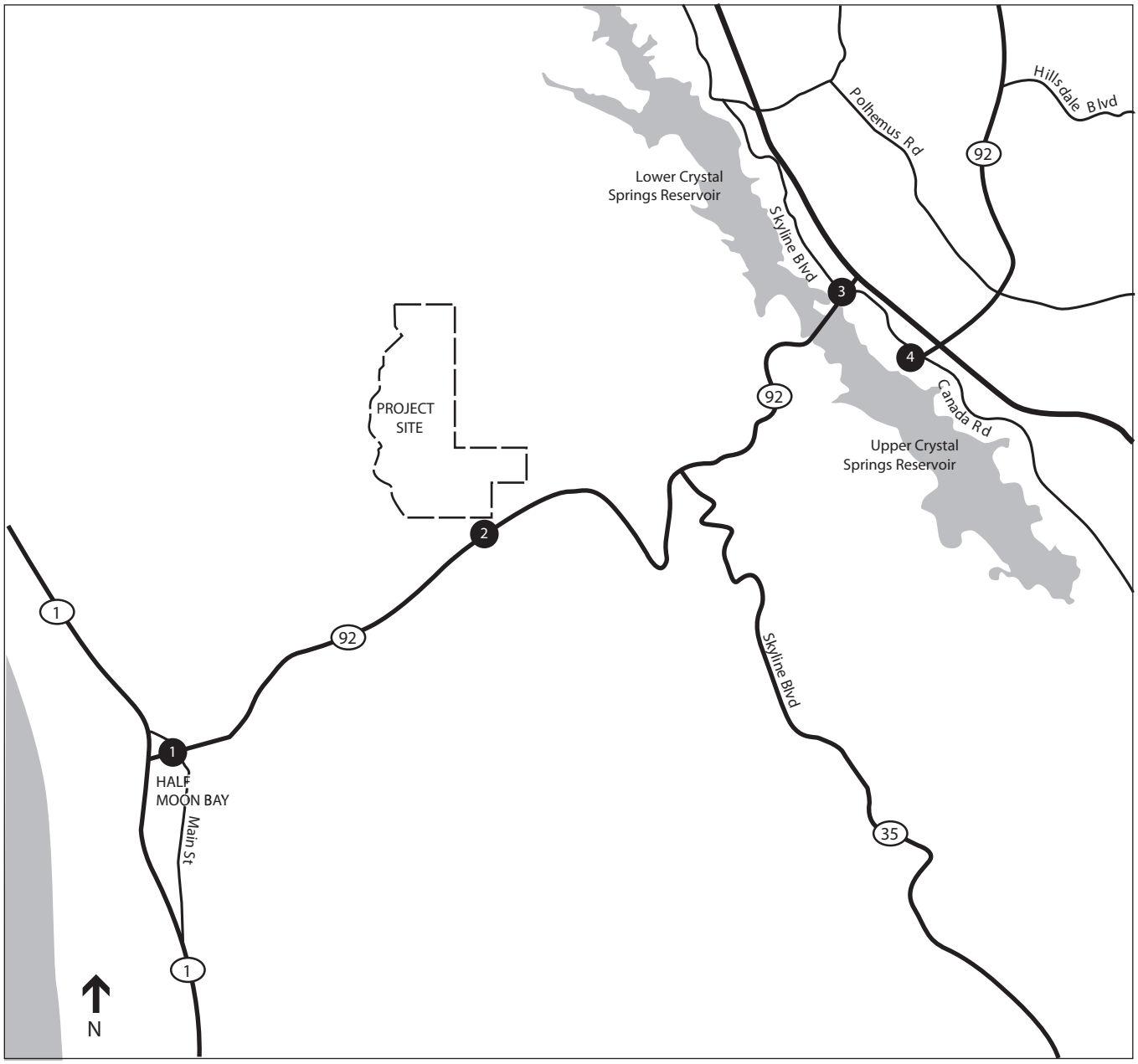
Figure IV.E-3
Existing Turning Movement Volumes (2007)

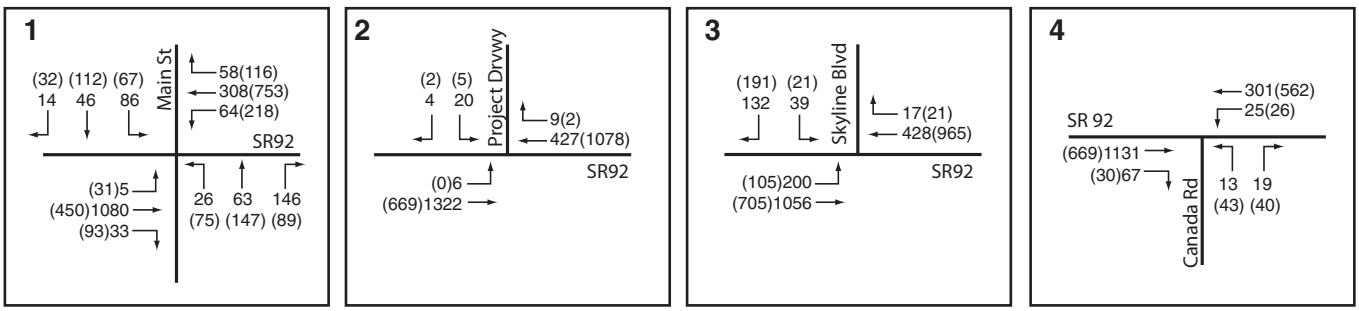


SOURCE: ESA

Pilarcitos Quarry EIR . 205280

Figure IV.E-4
Project Trip Distibution



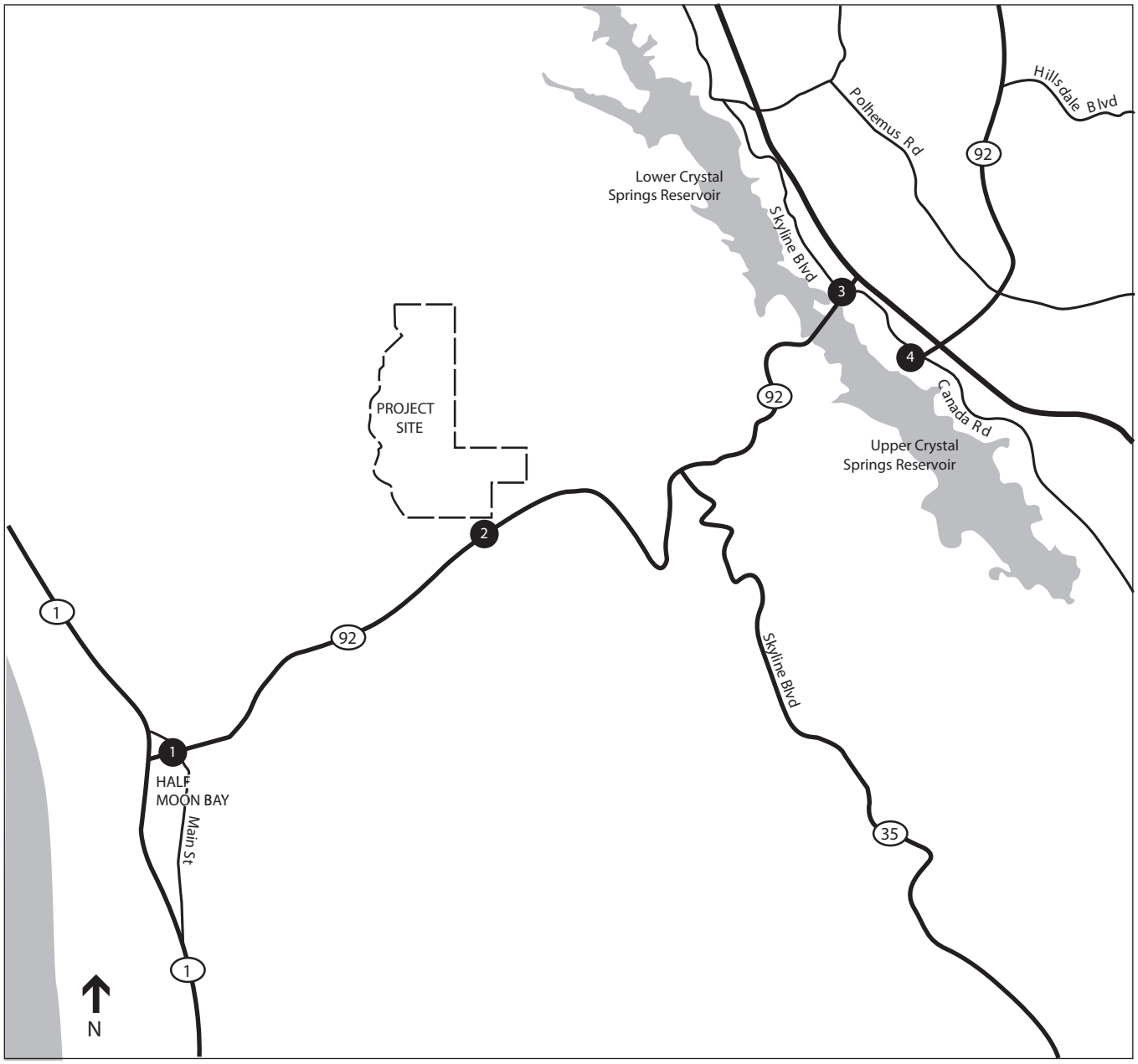


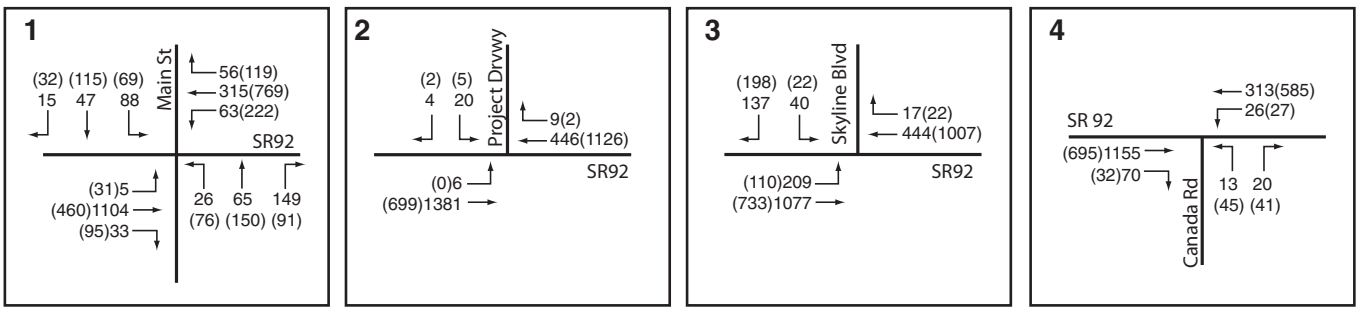
XX(XX) = AM(PM)

SOURCE: ESA

Pilarcitos Quarry EIR . 205280

Figure IV.E-5
2010 Plus Project Turning Movement Volumes



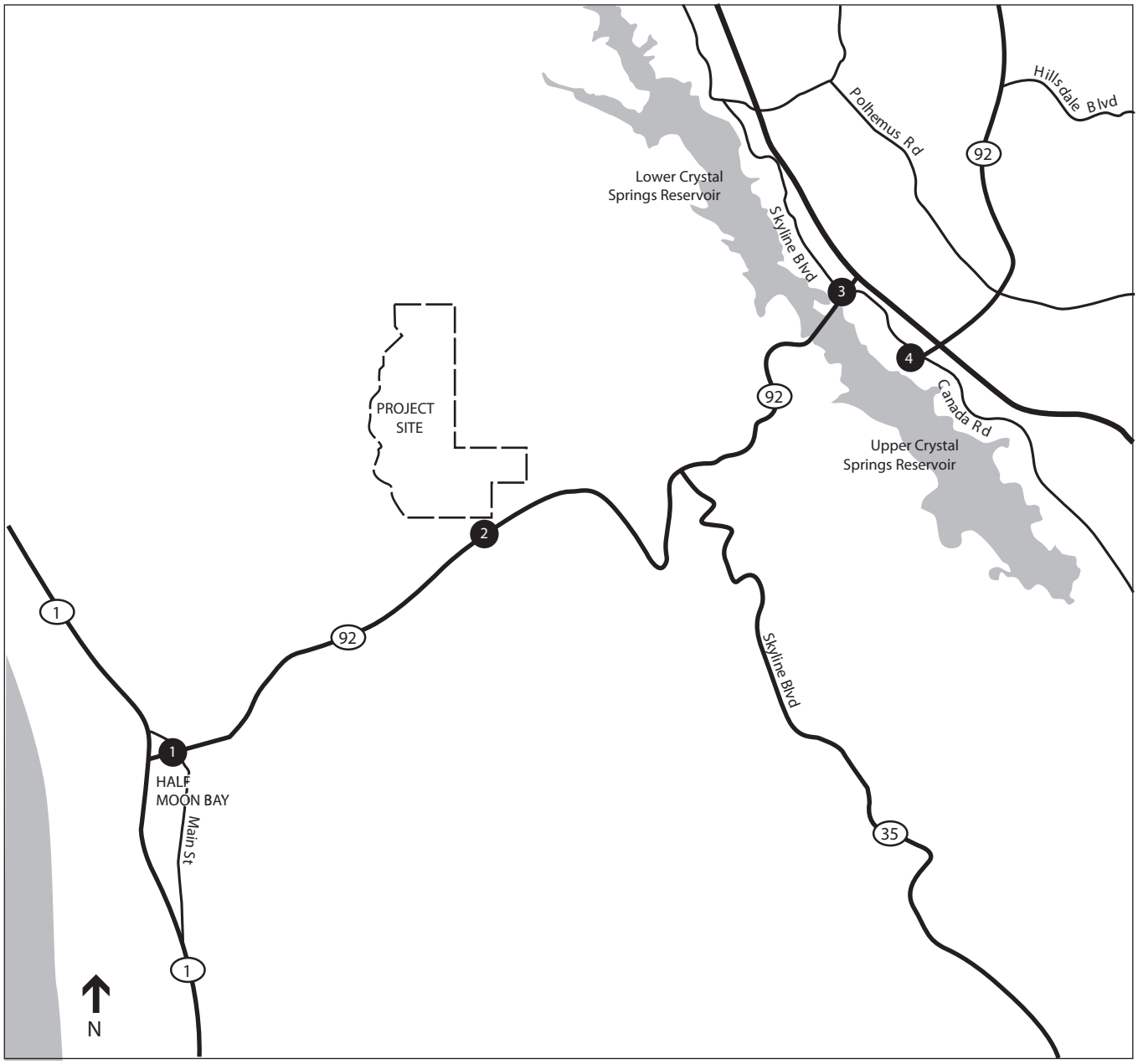


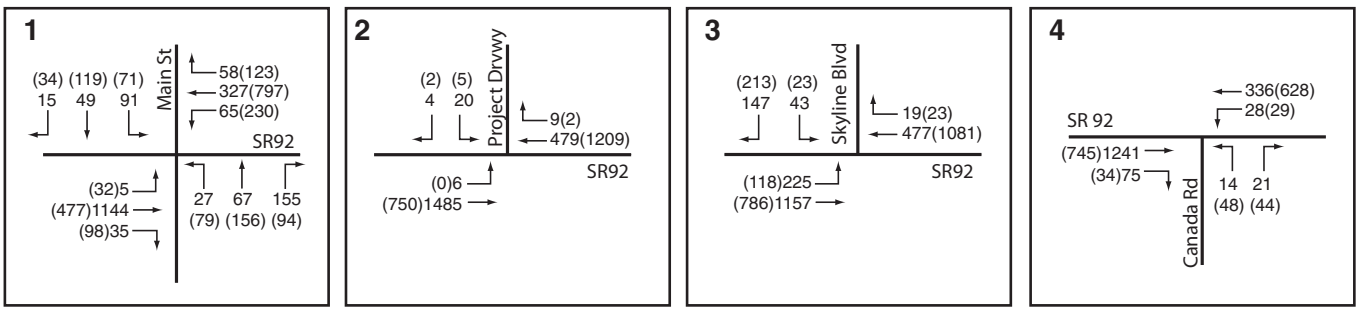
XX(XX) = AM(PM)

SOURCE: ESA

Pilarcitos Quarry EIR . 205280

Figure IV.E-6
2013 Plus Project Turning Movement Volumes



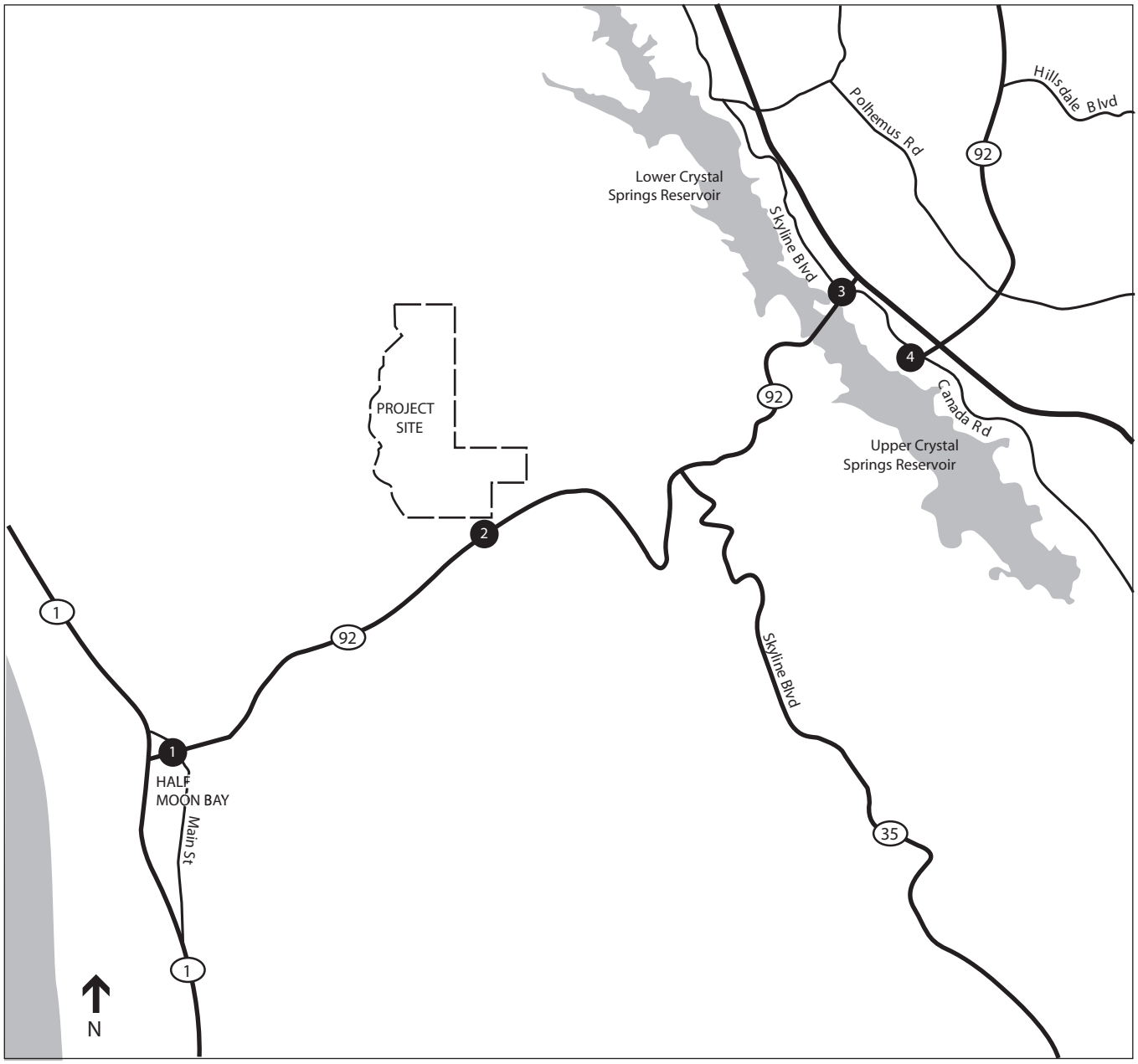


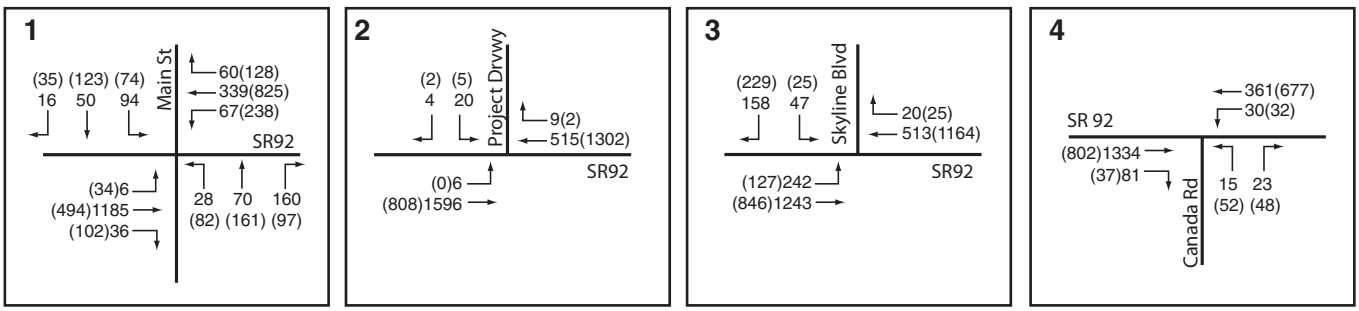
XX(XX) = AM(PM)

SOURCE: ESA

Pilarcitos Quarry EIR . 205280

Figure IV.E-7
2018 Plus Project Turning Movement Volumes



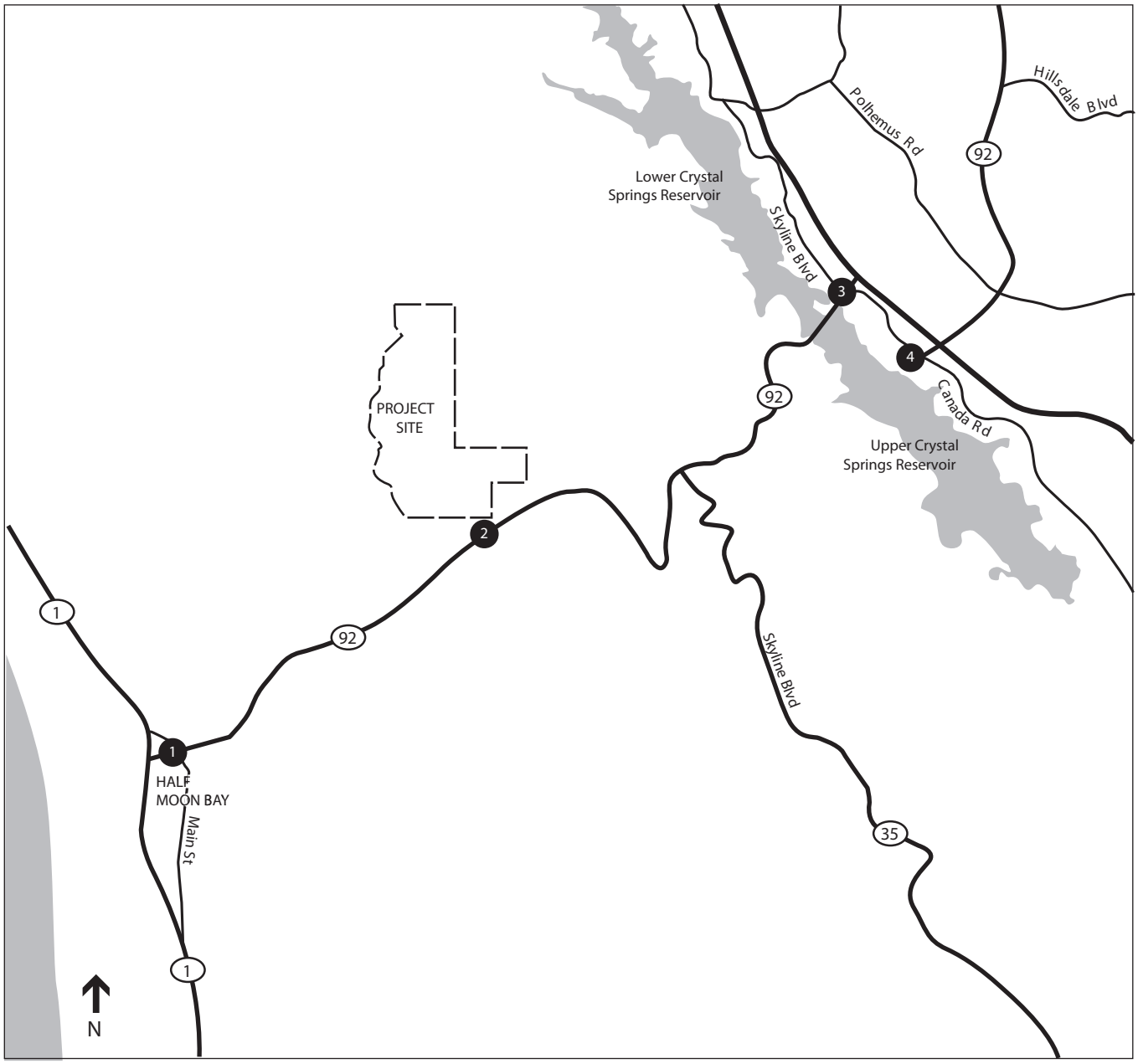


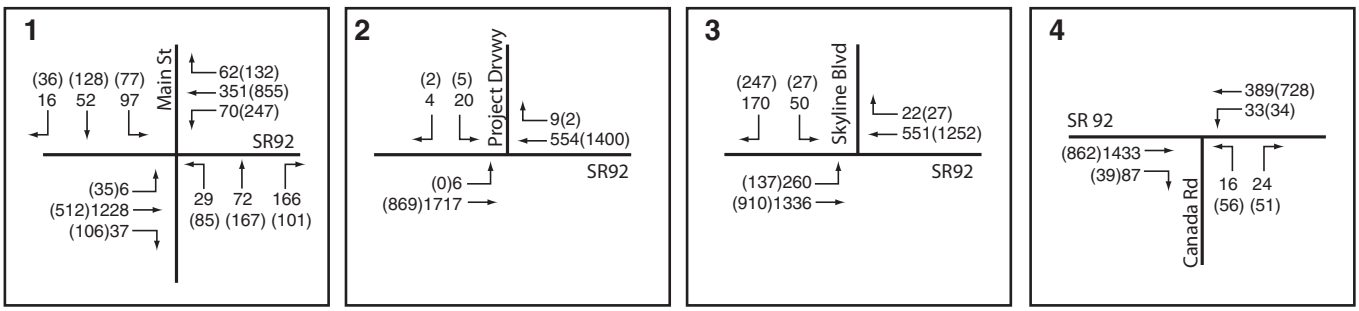
XX(XX) = AM(PM)

SOURCE: ESA

Pilarcitos Quarry EIR . 205280

Figure IV.E-8
2023 Plus Project Turning Movement Volumes





XX(XX) = AM(PM)

SOURCE: ESA

Pilarcitos Quarry EIR . 205280

Figure IV.E-9
2028 Plus Project Turning Movement Volumes

CHAPTER VI
Mitigation Monitoring and Reporting Program

As the Lead Agency under the California Environmental Quality Act (CEQA), San Mateo County is required to adopt a program for monitoring, reporting, and verifying the implementation of mitigation measures specified in this Environmental Impact Report (EIR). This Lead Agency responsibility originates in Public Resources Code §21081.6(a), and CEQA *Guidelines* sections §15091(d) and §15097.

A. Monitoring Purpose and Authority

The purpose of a Mitigation Monitoring and Reporting Program (MMRP) is to ensure that measures adopted to mitigate or avoid significant impacts are implemented. An MMRP can be a working guide to facilitate not only the implementation of mitigation measures by the Project applicant, but also the monitoring, compliance and reporting activities of the County and other regulatory agencies. The County may delegate duties and responsibilities for monitoring to other environmental monitors or consultants as deemed necessary, and some monitoring responsibilities may be assumed by responsible agencies, such as the Regional Water Quality Control Board (RWQCB) and the California Department of Fish and Game (CDFG).

B. Mitigation Compliance Responsibility

The applicant is responsible for successfully implementing all the mitigation measures in the MMRP. Standards for successful mitigation also are implicit in many mitigation measures that include such requirements as obtaining permits or avoiding a specific impact entirely. Other mitigation measures include detailed success criteria. Additional mitigation success thresholds will be established by applicable agencies with jurisdiction through the permit process and through the review and approval of specific plans for the implementation of the mitigation measures.

C. Public Access to Records

The public is allowed access to records and reports used to track the MMRP and to implement mitigation measures specified in this EIR. Monitoring records and reports will be made available for public inspection by the San Mateo County Planning Department.

D. Mitigation Monitoring and Reporting Table

The Mitigation Monitoring and Reporting table (**Table VI-1**) lists the following information for each significant impact identified in this EIR:

- Impact (impact number, description, and level of significance after mitigation);
- Mitigation Measure (full text of the measure);
- Monitoring/reporting action;
- Timing; and
- Verification entity and timing.

Some of the terms used in Table VI-1 require explanation:

- "Final Project approval" would occur when the final administrative appeal of a decision to approve the Project has been exhausted. The San Mateo County Planning Commission will first decide whether to approve the Project; their decision may be appealed to the County Board Supervisors, and, ultimately, to the California Coastal Commission.

- "Five-year permit renewal" refers to the scheduled renewal of the Surface Mining Permit, which is issued by San Mateo County with a five-year term. The permit renewal process provides the County the opportunity to examine whether changes to quarry operations have occurred or are planned that may require additional CEQA review and/or imposition of new or revised conditions.

Following Table VI-1 at the end of this chapter, **Table VI-2** provides a compiled list of the reports and studies that the applicant would be required to submit as part of the Mitigation Monitoring and Reporting Program, should the Project be approved. These reports and studies are described in more detail in Table VI-1; Table VI-2 is intended to provide a summary list and schedule of the major components of the Mitigation Monitoring and Reporting Program.

TABLE VI-1
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Geology, Soils, and Seismicity				
Impact B.1: During the active mining phases, rock and soil slopes that could be over-steepened due to proposed mining practices could fail, causing debris flows or rock wedge failures within the proposed quarry pits. Such slope failures could injure on-site workers, and/or result in the degradation of water quality within Nuff Creek. (Less than Significant with mitigation)	**Mitigation Measure B.1a:** Quarried slopes shall be benched every 100 feet to create stable slopes with intermediate catchment points for rock that may become loose and fall downslope. In addition, a low earth berm is maintained at the outer edge of the extraction area to prevent rock from rolling away from the work area. Maintenance of drainage and sediment facilities, repair to the access roads, and cleanup of rock spills shall occur on a routine basis.	**Mitigation Monitoring and Reporting Measure B.1a:** During the SMARA-required inspection of the mining operation, the inspector will note the implementation of Mitigation Measure B.1a.	Within 6 months of final Project approval, and at least annually thereafter.	Verified by San Mateo County Planning and Building Department, and reported to the State Office of Mine Reclamation.
	Mitigation Measure B.1b: *Slope Stability Evaluations*. Prior to each mining phase, a California Registered Geotechnical Engineer and a California Certified Engineering Geologist shall prepare a geologic model of the areas to be excavated that depict the depth and extent of the soil and rock material underlying the area. The geologic model shall be based on site investigations, including but not limited to, borings and core analysis to characterize the range of subsurface conditions. The geologic model shall develop information on the material and mass properties of the rock units and shall incorporate information on structural discontinuities (e.g. joints, fractures, and shear zones) and groundwater conditions in the model. This model shall be used as a basis upon which to perform slope stability evaluations. Slope stability analyses shall be required for all mining cuts; earthen berms and stockpiles whose slope gradient is steeper than two horizontal to one vertical (2:1); and on other slopes that possess unstable geologic conditions such as unsupported discontinuities or evidence of prior landslide activity. Under static conditions (gravity), proposed slope configurations must demonstrate a minimum factor of safety of 1.5. Under seismic conditions, the minimum factor of safety and expected soil displacements shall be consistent with standards presented in *Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California* (CGS, 1997). Should proposed slopes not meet the minimum safety standards, the quarry design shall not be approved. The cut slope geometry and bench system shall be modified until the applicant can demonstrate that safety and	**Mitigation Monitoring and Reporting Measure B.1b:** The required Report of Slope Stability, including recommendations, will be reviewed and approved by the San Mateo County Planning Department, and forwarded to the State Office of Mine Reclamation.	Prior to commencement of each planned mining phase.	Verified by County Planning and Building Department, and reported to the State Office of Mine Reclamation.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Geology, Soils, and Seismicity (cont.)				
Impact B.1 (cont.)	stability requirements are met. Slope stability evaluations and any associated recommendations shall (1) be reviewed, and stamped by a California Registered Geotechnical Engineer or a California Certified Engineering Geologist, (2) be reviewed and approved by the San Mateo County Planning and Building, Division Development Review Center, and (3) demonstrate compliance with Surface Mining and Reclamation (SMARA) laws.			
	Mitigation Measure B.1c: *Adaptive Management Plan*. The Project applicant shall include in its mining plan an Adaptive Management Plan, which shall describe alternative plans and procedures should unanticipated, low-competency rock conditions be encountered in the course of mining operations. The plan shall establish a schedule and procedure for collecting rock strength and structural data as active mining proceeds (e.g. spacing, pervasiveness and orientation of rock discontinuities, groundwater seepage). Based on the experience of the applicant and/or its consultant, the plan shall describe typical or likely alternative plans in the event low-strength or otherwise hazardous rock conditions are encountered. In order to avoid potential secondary impacts, the adaptive management plan shall not prescribe or allow alternative plans that result in an increase in final mining volumes or disturbance area described in this mining plan.	**Mitigation Monitoring and Reporting Measure B.1c:** The Slope Stability Adaptive Management Plan will be provided to San Mateo County following final Project approval, and prior to commencement of mining or reclamation activities under the Project. This plan will be incorporated into a conforming Mining and Reclamation Plan. This plan shall be updated each five years, at the time of the applicant's submittal of an application for permit renewal.	Within 60 days of final Project approval. Upon final Project approval, and each five years at time of submittal application for permit renewal.	Verified by County Planning and Building Department, and reported to the State Office of Mine Reclamation, upon final Project approval and prior to commencement of any Project mining activities; and with receipt of application for permit renewal every five years.
	Mitigation Measure B.1d: *Monitoring and Inspection*. A California Registered Geotechnical Engineer or Certified Engineering Geologist shall inspect on a quarterly basis the quarry slopes during excavation, and also following major storms and earthquakes to assess bedrock fracture and joint conditions. The inspection shall require continued mapping and movement monitoring of the mining slopes to assess slope stability. If a slope condition presents risk to mine safety or the potential for erosion/siltation, repair measures shall be implemented. Engineering recommendations for slope repair or stabilization shall be approved by San Mateo Planning and Building Department, Development Review Center and incorporated into the proposed Project.	**Mitigation Monitoring and Reporting Measure B.1d:** The applicant shall prepare and submit to the San Mateo County Planning Department a Report of Slope Inspection providing the results of the quarterly inspection, including any recommendations.	The applicant shall submit the required Report of Inspection within 30 days of the close of each calendar quarter for the duration of the Project.	Verified by County Planning and Building Department, and reported to the State Office of Mine Reclamation, within 30 days of the end of each calendar quarter.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Geology, Soils, and Seismicity (cont.)				
Impact B.2: Grading associated with the water storage area that would be created in Phase II of the proposed mining plan could destabilize an existing translational landslide mass. Proposed mining could result in reactivation of this large translational mass into the water storage area causing risk of injury to on-site workers and/or potential water quality impacts. (Less than Significant with mitigation)	**Mitigation Measure B.2: *Deep-Seated Landslide Removal*.** Phase II and Phase III of the proposed mining plan shall be modified to avoid cutting into the middle or base of the identified deep-seated landslide mass. The creation of the water storage feature and mining areas A and B shall be re-sequenced and reshaped so that the landslide is removed from top to bottom as a mining operation that sequences into the formation of Water Storage Area 1. The modified mine geometry and phasing shall be reviewed and approved by a California Geotechnical engineer, and the San Mateo County Planning and Building Department, and incorporated into the proposed Project.	**Mitigation Monitoring and Reporting Measure B.2:** The revisions to Phase II and Phase III shall be submitted to the San Mateo County Planning Department within 180 days of final Project approval, and will be incorporated into a conforming Mining and Reclamation Plan.	Within 180 days of final Project approval.	Verified by County Planning and Building Department, and reported to the State Office of Mine Reclamation, upon final Project approval and prior to commencement of any Project mining activities.
Impact B.3: The water storage feature that would be created during Phase III and early in Phase IV of the proposed mining plan could increase hydraulic pressure on the adjacent mined slopes. This could destabilize adjacent mined slopes, and result in potential risk of injury to on-site workers and/or potential water quality impacts. (Less than Significant with mitigation)	**Mitigation Measure B.3: *Seepage Analyses*.** Prior to Phase III of the proposed mining plan, a seepage analysis shall be conducted by a qualified geotechnical engineer to determine the potential for the transitional water storage area to cause seepage into or increase pore pressures along the slopes of the planned mining pits A and B. In conducting the seepage analysis, the geotechnical engineer shall use rock strength and structure data obtained from data collection activities described in Mitigation Measure B.1b and B.1c. Should the analysis indicate an increased risk of slope failure as a result of the transitional water storage area, the geotechnical engineer shall provide recommendations for alternative mining pit geometry, slope repair or hazard mitigation. Engineering recommendations shall be approved by the San Mateo County Planning and Building Department and incorporated into the proposed Project.	**Mitigation Monitoring and Reporting Measure B.3:** The required Seepage Analysis shall be presented to the San Mateo County Planning Department for review and approval, prior to commencement of mining Phase III.	Prior to commencement of mining Phase III.	Verified by County Planning and Building Department, and reported to the State Office of Mine Reclamation, prior to commencement of mining Phase III.
Impact B.4: Removal of benches in the reclamation phases of the Project could potentially reduce slope stability and could hinder proper reclamation. (Less than Significant with mitigation)	**Mitigation Measure B.4:** Removal of the quarry benches shall be deemed permissible under the proposed Reclamation Plan if all four of the following conditions are met: 1. A California Registered Geotechnical Engineer and a California Certified Engineering Geologist, using an accepted slope stability analysis methodology, demonstrate and certify that the static and pseudo-static stability of the slope with benches removed would remain above recommended factors of safety (minimum factors of safety 1.3 pseudo-static and 1.5 static).	**Mitigation Monitoring and Reporting Measure B.4:** the applicant shall provide the required Bench Removal Analysis to the San Mateo County Planning Department. The Department will employ a Geotechnical Engineer to conduct the third party review.	Prior to commencement of final reclamation grading for each mining phase.	Verified by County Planning and Building Department, and reported to the State Office of Mine Reclamation, prior to commencement of final reclamation grading.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Geology, Soils, and Seismicity (cont.)				
Impact B.4 (cont.)	2. An independent third party California Registered Geotechnical Engineer peer reviews and accepts the slope stability analysis completed pursuant to Condition 1, above. 3. The removal of the benches is consistent and in compliance with SMARA statue and regulations. 4. A California Registered Civil Engineer certifies that the final slope design will provide safe access for machinery and personnel for resoiling, revegetation, and maintenance of vegetation.			
Impact B.5: A major earthquake in the region could result in severe seismic ground shaking and earthquake-induced ground failures (such as landslides and liquefaction) along quarry slopes, earthen banks, and water containment structures. The effect of potential earthquake-induced ground failures would be a significant impact. (Less than Significant with mitigation)	**Mitigation Measure B.5: *Proper design of earthen water impoundment structures*.** Overburden stockpile materials and earthen dams shall be placed and compacted using conventional heavy equipment according to specifications determined by a California Registered Geotechnical Engineer and a California Certified Engineering Geologist. At a minimum, the water impoundment structures shall be designed according to DSOD standards for assessing seismic loads, and shall be constructed of materials not susceptible to liquefaction. All grading work and fill placement plans shall be in conformance with the San Mateo County Surface Mining and Reclamation Ordinance and California Building Code (CBC) and be approved, in writing, by a California registered Geotechnical Engineer and a California Certified Engineering Geologist. Design specification for all dams 25 feet or more in height or with an impounding capacity of 50 acre feet or more shall be reviewed and approved by the California Department of Water Resources, Division of Safety of Dams.	**Mitigation Monitoring and Reporting Measure B.5:** The Earthen Water Impoundments Geotechnical Standards Report containing construction specifications will be prepared by the applicant and submitted to the San Mateo County Planning Department and, if applicable, to the Division of Safety of Dams. The report will be incorporated into a conforming Mining and Reclamation Plan.	Within 180 days of final Project approval.	Verified by County Planning and Building Department, and reported to the State Office of Mine Reclamation, upon final Project approval and prior to commencement of any Project mining activities.
Impact B.6: The proposed water storage features could be subject to displacement waves during a large regional earthquake, either via seiche or landslide originating outside the boundaries of the proposed mining pits. These waves could overtop the retaining features and cause flooding within the quarry or downstream. (Less than Significant with mitigation)	**Mitigation Measure B.6: *Proper Design of Water Storage Ponds and Earthen Dams*.** Bedrock freeboard (i.e. height of dam above water level), dam stability, and spillway capacity shall be adequate to contain the anticipated maximum dynamic displacement of water in the event of a landslide or earthquake-induced seiche. Prior to the commencement of each phase of mining, construction of the transitional water storage features and reclamation pond, adequate bedrock free board above the maximum water level in each of the phased water retention ponds shall be established. The	**Mitigation Monitoring and Reporting Measure B6:** the applicant shall prepare and submit to San Mateo County for review and approval Design Specifications for Bedrock Freeboard, Dam Stability, and Spillway Capacity that will apply to all water storage features. These specifications will be incorporated into a conforming	Within 180 days of final Project approval, and prior to commencement of each mining phase.	Verified by County Planning and Building Department, and reported to the State Office of Mine Reclamation and Division of Safety of Dams, upon final Project approval and prior to commencement of each mining phase.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Geology, Soils, and Seismicity (cont.)				
Impact B.6 (cont.)	amount of free board required shall be determined based on an engineering study of the wave height that might be displaced as a large landslide enters any one of the water storage features or an earthquake-induced seiche occurs. Standards for constructing water retention features and sediment catchment ponds shall specify 1) location of the ponds, vis-à-vis slopes that may become unstable, 2) the construction of the dams in terms of construction materials and drainage, and 3) the creation of spillway criteria to accommodate sudden dam overtopping. Design specification for all the temporary water storage features, as well as the final reclamation pond, shall be reviewed and approved by the California Department of Water Resources, Division of Safety of Dams prior to construction.	Mining and Reclamation Plan. The specifications will be updated prior to each mining phase.		
Impact B.7: Vegetation removal and ground disturbance associated with overburden stripping, overburden stockpiling, quarrying, and creation of water storage features could promote accelerated erosion and soil loss. (Less than Significant with mitigation)	**Measure B.7a:** The Mining and Reclamation Plan includes plans to control sediment and runoff from each mining expansion area, and also to re-soil and revegetate each area upon completion of mining. In addition, access roads will be periodically resurfaced or graded (see Chapter 2, Project Description).	**Mitigation Monitoring and Reporting Measure B.7a:** Inspection of sediment and runoff control facilities will be included in the County's SMARA-required periodic inspection of the quarry operation.	Within six months of Project approval, and at least annually thereafter.	Verified by County Planning and Building Department, and reported to the State Office of Mine Reclamation within 30 days of each inspection.
	Mitigation Measure B.7b: Implement Mitigation Measure B.1a, B.1b and B.1d, above.	See Mitigation Monitoring and Reporting Measure B1.	See Mitigation Monitoring Measure B1.	See Mitigation Monitoring Measure B1.
	Mitigation Measure B.7c: Revegetation of the site shall comply, as required, with § 3705 of SMARA, which establishes performance standards for revegetation. In addition to the other requirements of § 3705, the applicant shall adhere to § 3705(e), which requires that a soil analysis be conducted to determine that the soil constituents are adequate to successfully implement the revegetation program. In the interim, sediment retention basins shall be designed to prevent runoff from entering Nuff Creek and maintained until successful implementation of the revegetation program has been achieved as defined in § 3705(m) of SMARA.	**Mitigation Monitoring and Reporting Measure B.7c:** A Revegetation Standards Report will be prepared by the applicant and submitted to the San Mateo County Planning Department for review and approval. The specifications will be incorporated into a conforming Mining and Reclamation Plan.	Within 60 days of final Project approval, and updated each five years thereafter.	Verified by County Planning and Building Department, and reported to the State Office of Mine Reclamation, upon receipt of Report and Report updates.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Geology, Soils, and Seismicity (cont.)				
Impact B.7 (cont.)	**Mitigation Measure B.7d:** The main culvert for Nuff Creek that runs through the processing area shall be inspected for structural integrity by a state licensed civil engineer. Any areas of failure or signs of imminent failure shall be repaired and designed to continue use for the life of the Project. Following initial evaluation, the culvert shall receive inspections every five years thereafter and repaired as necessary.	**Mitigation Monitoring and Reporting Measure B.7d:** The applicant shall provide a Report of Culvert Inspection within three months of final Project approval, and each five years thereafter.	Within three months of final Project approval, and each five years thereafter.	Verified by County Planning and Building Department, and reported to the State Office of Mine Reclamation, within 30 days of report submittal.
	Mitigation Measure B.7e: All surface and subsurface drainage facilities (excluding the main culvert discussed above), overburden stockpiles, siltation retention structures, and any other erosion control improvements shall be inspected annually by a civil engineer or engineering geologist to confirm adequate performance. Such facilities shall be cleaned and maintained on an annual basis and routinely inspected for erosion during the rainy season.	**Mitigation Monitoring and Reporting Measure B.7e:** The applicant shall provide the required Erosion Control Facilities Inspection Report to the San Mateo County Planning Department within 90 days of final Project approval, and annually thereafter.	Within 90 days of final Project approval and annually thereafter.	Verified by County Planning and Building Department, and reported to the State Office of Mine Reclamation, upon report submittal.
Impact B.8: The use of controlled detonations (blasting) to fracture and loosen rocks during quarry excavation may produce vibratory ground motion capable of triggering slope displacement or failure. (Less than Significant with mitigation)	**Mitigation Measure B.8:** The applicant shall incorporate all recommendations made by Revey Associates assessment report into the Project plans. These are: • Blast-hole diameter should not exceed 4.5 inches. • Charge-weight-per-delay should not exceed 200 pounds. • Minimum confining rock burden on all charges shall be at least 20 charge-diameters. • All charges shall be stemmed with at least 8 feet of clean washed crushed stone. • Blast-holes located within 500 feet of Ox Mountain Landfill cells shall be monitored for the presence of methane gas. • Explosive spills will be cleaned up immediately to prevent losses of nitrates and ammonia to the ground and neighboring water resources. • Ground vibration and air-overpressure should be measured for all blasts. Measurements should be done at the closest point of the waste cells at the Ox Mountain Landfill site when blasts are located within 500 feet of the site. Monitoring for other blasts should be done at the nearest offsite structure or some other point of concern. All	See **Mitigation Monitoring and Reporting Measure G.4.**	See **Mitigation Monitoring and Reporting Measure G.4.**	See **Mitigation Monitoring and Reporting Measure G.4.**

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Geology, Soils, and Seismicity (cont.)				
Impact B.8 (cont.)	monitoring should conform to the most current standards set forth by the Vibration Section of the Society of Explosives Engineers.			
Hydrology and Water Quality				
Impact C.1: Proposed quarrying within Nuff Creek Canyon and subsequent reclamation could cause erosion, which would increase sediment loading downstream in Nuff Creek and Pilarcitos Creek. Additionally, inadvertent release of fuel or other chemicals associated with equipment operation could also degrade water quality in these waterways. (Less than Significant with mitigation)	**Mitigation Measure C.1a:** The Mining and Reclamation Plan (LSA 2009) proposes the following measures and design elements to reduce erosion and sedimentation into Nuff Creek during the proposed quarrying Project: • During mining activities each bench is sloped from front to back at a two percent gradient and laterally at a two to five percent gradient to promote positive drainage. • Before mining commences in a new area, a field fence will be installed at the outer boundary of the work area and a silt fence attached to the inside face of the field fence. This fencing protects against rock and sediment entering protected habitat areas and prevents frogs, snakes and other species of concern from entering the mining area. • Mining will begin at the top of each spur ridge. As the excavation proceeds downslope, the mined benches and intervening slopes will be constructed and a temporary working terrace formed, allowing room for equipment to maneuver and raw aggregate to be handled. • A temporary berm will be constructed at the perimeter of the working terrace to prevent runoff, rock and sediment from leaving the work area. A temporary sediment pond will be constructed on the working terrace and relocated as the working terrace moves downslope.	**Mitigation Monitoring and Reporting Measure C.1a:** During the SMARA-required periodic inspection of the mining operation, the inspector will note the implementation of Mitigation Measure C.1a.	Within six months of final Project approval, and at least annually thereafter.	Verified by County Planning and Building Department, and reported to the State Office of Mine Reclamation, within 30 days of inspection.
	Mitigation Measure C.1b: The Mining and Reclamation Plan (LSA 2009) proposes the following measures to reduce erosion and sedimentation into Nuff Creek after reclamation: • Final re-contoured slopes will have an overall gradient of 1:1.25 or flatter. Slopes in Area H and Area J will have 1:1 final slopes with 25 foot benches every 100 feet. Final re-contoured slopes will be re-soiled and revegetated.	**Mitigation Monitoring and Reporting Measure C.1b:** During the SMARA-required annual inspection of the mining operation, the inspector will note the implementation of Mitigation Measure C.1b. In addition, the results of the periodic inspection	Within six months of final Project approval, and annually thereafter.	Verified by County Planning and Building Department, and reported to the State Office of Mine Reclamation, within 30 days of inspection.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Hydrology and Water Quality (cont.)				
Impact C.1 (cont.)	• Topographic irregularities on the canyon floor will be graded out and the sediment pond system removed as part of the final phase of reclamation. The canyon floor will be graded to create a series of small ponds and wetland areas (see Figure III-10 in the Project Description). • Periodic inspection of the final mined slopes and canyon floor will be performed during the two-year maintenance period. Final grades will be re-contoured if erosion rills are found more frequently than every fifty feet laterally and if individual rills become deeper than one foot. Straw wattle will be installed during site maintenance to mitigate areas where erosion is detected. • The lower slopes in Nuff Canyon are subject to sloughing and small landslides. The access road throughout Nuff Canyon will be periodically inspected and loose material will be removed, spread out and incorporated into the access roads. Access roads will be periodically re-graded and re-surfaced.	described in Mitigation Measure C.1b will be included in the Erosion Control Facilities Inspection Report described in Mitigation Monitoring and Reporting Measure B.7e.		
	Mitigation Measure C.1c: The Mining and Reclamation Plan (LSA 2009) proposes to monitor and if necessary remediate channel instability in restored and created stream channels following reclamation. Geomorphic monitoring of created and enhanced channels will be conducted twice in the first year following restoration, and once each year during the remainder of the monitoring period. The first round of monitoring in year one will be conducted during the first rainy season (November – March) following reclamation to monitor the effects of storm flows on channel stability. The second round of monitoring in year one and the annual monitoring during the remaining years will be conducted during the dry season (June – September) to identify any erosion from the previous winter that is in need of repair before the onset of the next rainy season. A reference riparian site will be established and monitored in the northern portion of the unmined quarry property, against which the performance of the restored creek channel(s) will be measured.	**Mitigation Monitoring and Reporting Measure C.1c:** The applicant shall prepare and submit to the San Mateo County Planning Department, the Regional Water Quality Control Board, and the Department of Fish and Game, an Annual Report of Channel Geomorphology Monitoring, detailing the results of the monitoring activity specified in the mitigation measure, including the assessment of need for remedial action.	By December 31 of each year following channel restoration.	Verified by County Planning and Building Department, Regional Water Quality Control Board, and Department of Fish and Game staff, annually following submittal of report.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Hydrology and Water Quality (cont.)				
Impact C.1 (cont.)	Monitoring of channel stability will focus on the condition of the bed and banks of the channel, as well as on the geomorphic evolution of the restored system. During each monitoring visit, the monitor will conduct a reconnaissance walk of the restored and enhanced channels and note the status of the following features of each drainage and riparian mitigation area: • Headcut formation • Bank stability • Bed incision • Sediment production • Effectiveness of riparian vegetation establishment at stabilizing bed and banks • Bed and floodplain interaction, where appropriate The monitor will perform an assessment of the need for potential remedial action in the event that: (1) new rills of a diameter or depth of 1 foot or greater are observed in restored channel banks; (2) the toe of slope of banks are noticeably undermined jeopardizing bank stability; or (3) headcuts have developed and are actively migrating.			
	Mitigation Measure C.1d: The applicant shall implement a storm water sampling and analysis program to monitor the quality of water discharged from the quarry site to Nuff Creek and Pilarcitos Creek. The purpose of this measure is to insure that stormwater flows do not contain substantial amounts of sediment or chemical and petroleum generated from the mining activities. Monitoring shall be implemented at the start of the proposed Project and continue through the active mining period and into the post-reclamation period. This program is intended to supplement, but not replace, monitoring required under the NPDES General Permit. Water samples shall be analyzed by a certified analytical laboratory for pH, total dissolved solids, total suspended solids, turbidity, specific conductance, and petroleum oil, and grease. Concentrations shall not exceed the levels set forth by the RWQCB in the then-current Basin Plan. If	**Mitigation Monitoring and Reporting Measure C.1d:** The applicant shall prepare and submit to San Mateo County and the Regional Water Quality Control Board an Annual Report of Stormwater Sampling and Analysis, detailing the results of the monitoring activity specified in the mitigation measure, including all laboratory results. The applicant shall immediately report any elevated sediment or contaminant loading.	Annually, by December 31.	Verified by County Planning and Building Department and the Regional Water Quality Control Board, following submittal of annual report.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Hydrology and Water Quality (cont.)				
Impact C.1 (cont.)	stormwater monitoring indicates elevated sediment load or the presence of foreign substances (oil, gasoline), the applicant shall report the increase to the RWQCB and San Mateo County. After reporting, the applicant shall determine the cause of the exceedance and propose, to the RWQCB and the County, methods of reducing stormwater sediment or contaminant loads. The applicant shall implement any corrective actions agreed to by the RWQCB. All storms that generate discharge from the active mining portion of the Project site to Pilarcitos Creek shall be monitored. However, as a practical measure, it shall not be required that monitoring events occur more frequently than once every two weeks. The discharge end of each outfall shall be made easily accessible for inspection and sampling.			
	Mitigation Measure C.1e: In the event that the post-reclamation stream monitoring specified in Mitigation Measure C.1c indicates that remedial action is necessary to maintain or achieve stream channel stability, the applicant shall, within one month of the monitoring, prepare a remediation plan. The remediation plan will be submitted to San Mateo County, the Regional Water Quality Control Board, and the California Department of Fish and Game for review and approval. The remediation plan will be implemented in accordance with a schedule to be determined by the reviewing agencies.	**Mitigation Monitoring and Reporting Measure C.1e:** The applicant shall prepare and submit for review and approval the specified Stream Channel Stabilization Plan, if indicated in the Annual Report of Channel Geomorphology Monitoring specified in Mitigation Measure C.1c.	Within 30 days of submittal of an Annual Report of Channel Geomorphology Monitoring that includes a recommendation for remedial action.	Verified by County Planning and Building Department, the Regional Water Quality Control Board, and the California Department of Fish and Game, following submittal of the remediation plan.
Impact C.2: Mining in the proposed expansion areas could alter stormwater runoff patterns and affect the peak surface flow in Nuff Creek. (Less than Significant with mitigation)	**Mitigation Measure C.2a:** The Mining and Reclamation Plan (LSA 2009) proposes the following measures and design elements that would reduce stormwater runoff and flooding potential in Nuff Creek during proposed quarrying of the Project: • Currently, stormwater generated from quarry slopes and the operations area travels through a series of sediment ponds prior to reaching two containment ponds (see Figure III-4 in Chapter III, Project Description). Each of these ponds is at least 20 feet in depth, the final pond having an outflow draining to Nuff Creek. These ponds have substantial capacity and water is rarely discharged.	**Mitigation Monitoring and Reporting Measure C.2:** Following final Project approval, and before the commencement of any new mining activity under the Project, the applicant shall prepare and submit to San Mateo County Planning Department, a complete set of Drainage Feature Plans, stamped by a California Professional Engineer, showing all drainage features described in Mitigation Measure C.2a, b, c, and d. Plans	Following Project final approval, and before commencement of any Project mining or reclamation activities.	Verified by County Planning and Building Department, upon receipt of plans.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Hydrology and Water Quality (cont.)				
Impact C.2 (cont.)	• When quarrying begins at other portions of the site as planned, the sediment basin capacity will be adjusted accordingly. The subsurface mining pits planned for each mining area will also be used to control runoff. **Mitigation Measure C.2b:** The Mining and Reclamation Plan (LSA 2009) proposes the following measures that would reduce flooding potential of Nuff Creek after reclamation: • Nuff Creek will be restored as a natural channel. A series of wetlands will be constructed in the operations area on the canyon floor, which will collect stormwater runoff from the adjoining reclaimed slopes. • A large water storage feature will be constructed in the area between proposed mining expansion Areas A and B. This facility will collect stormwater runoff from the adjacent reclaimed slopes as well as high flows diverted from Nuff Creek. **Mitigation Measure C.2c:** All drainage plan features shall be designed to accommodate the 20-year 1-hour design storm (as per SMARA requirements). **Mitigation Measure C.2d:** The applicant shall ensure that Nuff Creek downstream of the quarry operation and the area of the Nuff Creek/Pilarcitos Creek confluence at Highway 92 do not receive stormwater flows exceeding the capacity of the conveyance facilities and these areas do not experience flooding during a major storm event (i.e., a 100-year event). As expansion areas are developed and become active mining areas, the applicant shall evaluate, and if necessary, redesign and retrofit all downstream stormwater conveyance and storage facilities. Redesign and retrofit of the stormwater management facilities shall be based on a surface water analysis conducted by a Registered Civil Engineer. The analysis shall update stormwater flow calculations, flood predictions, and watershed capacity estimates given the changes in the watershed and shall be informed by observations of the performance and efficiency of facilities existing at that time.	shall show each mining and reclamation phase. Plans may be at a conceptual level for future mining phases, to be revised and refined prior to the commencement of each mining phase. The plans will be incorporated into a conforming Mining and Reclamation Plan.		

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Hydrology and Water Quality (cont.)				
Impact C.4: Mining of proposed expansion areas could alter the local groundwater gradient, resulting in capture and reduction of baseflow from Nuff Creek, which could affect water quality and impair the beneficial uses of the Nuff Creek and Pilarcitos Creek. (Less than Significant with mitigation)	**Mitigation Measure C.4a:** The applicant is proposing to use the planned water storage facilities for augmenting dry season flows. The amount of water that would be available for this purpose is about 80 acre feet, which could provide 0.5 cubic feet per second (cfs) for 80 days, or 0.25 cfs for 160 days (effectively the whole summer and fall). A quarter of a cfs is equivalent to 112 gpm, about twice the late dry-season baseflow in Nuff Creek during a year with wetter-than-normal rainfall. Therefore, if the water storage facilities were available to augment dry season baseflow, this could more than off-set the potential loss of baseflow to the mining pits and water storage facilities. The applicant proposes that decisions regarding use of the stored water would be made by the Pilarcitos Creek Restoration Workgroup and incorporated into the Pilarcitos Integrated Watershed Management Plan; the applicant states that, alternatively, decisions regarding use of stored water would be made by regulatory agencies, such as the National Marine Fisheries Service (NMFS) or California Department of Fish and Game (CDFG).	**Mitigation Monitoring and Reporting Measure C.4a:** Within one year of final Project approval, the applicant shall submit a Report of Water Storage Facilities Management System to the San Mateo County Planning Department describing its efforts to establish a decision-making body or mechanism for managing water storage and releases from the proposed water storage facilities. The report will include details on the structure and composition of the decision-making body, its funding source, its meeting schedule, and how it will interact with the relevant regulatory agencies. Subsequently, meeting notices and minutes for the decision-making body will be supplied to the San Mateo County Planning Department in a timely fashion.	Within one year of final Project approval, and periodically thereafter.	Verified by San Mateo County Planning Department, upon receipt of report and additional materials
	Mitigation Measure C.4b: In order to determine changes in the baseflow of Nuff Creek that could be attributable to mining activities, the applicant shall implement an ongoing program to monitor creek flow. Within 3 months of Project approval, the applicant shall install two stream monitoring stations: one upstream of the mining area, and one downstream. Each station shall consist of a continuous monitoring and recording water level meter, which takes and records measurements at least hourly. To relate water level to water flow, the applicant shall conduct periodic streamflow measurements at a designated stream cross-section, and develop a H:Q rating table. In the first year of monitoring, at least six stream flow measurements will be taken at different flows at each station, to develop the rating table. At least three measurements will be taken in subsequent years to maintain and refine the rating table.	**Mitigation Monitoring and Reporting Measure C.4b:** The applicant shall provide the San Mateo County Planning Department with a Report of Stream Monitoring Stations and Monitoring Wells Installation within four months of final Project approval. This will include location, equipment, and monitoring protocols. The applicant shall also provide the Annual Report of Stream and Groundwater Monitoring by December 31 of each year. The report will cover the previous water year (October 1 – September 30).	Within four months of final Project approval, and annually, by December 31, thereafter.	Verified by County Planning and Building Department.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Hydrology and Water Quality (cont.)				
Impact C.4 (cont.)	In addition, the applicant shall develop monitoring wells between Nuff Creek and proposed Areas A and B in sufficient number and location to ascertain the groundwater gradient between the mining areas and the creek. By December 31 of each year, the applicant shall prepare an annual report of flows in Nuff Creek and groundwater conditions during the previous water year (Annual Streamflow Monitoring Report). The Annual Streamflow Monitoring Report will include, at a minimum, the following information: all water level, flow, and related measurements, presented in tabular, graphic, and electronic spreadsheet format; daily, monthly, and annual stream discharge measurements; statistical comparisons with historic (past years') data and, if available, data from stream gauges on Pilarcitos Creek; results of well monitoring, including analysis of ground water flow; conclusions regarding any changes to the flow regime in Nuff Creek and Pilarcitos Creek. This monitoring program shall be maintained through the conclusion of site reclamation.			
	Mitigation Measure C.4c: The applicant shall manage releases from water storage facilities in a manner such that Nuff Creek's baseflows are not diminished, relative to baseline conditions. Baseline conditions will be characterized through implementation of Mitigation Measure C.4b. A plan for management of releases from the water storage facilities (Water System Operation and Management Plan) will be included in the water rights application, prepared pursuant to Mitigation Measures C.5b and C.5c. Furthermore, a report (Periodic Hydraulic Report) prepared by a California-certified hydrogeologist or hydraulic engineer, shall be prepared and submitted to San Mateo County at each 5-year permit renewal, and prior to implementation of each proposed mining phase. The Periodic Hydraulic Report will include the following: • a review off the previous years' Annual Streamflow Monitoring Reports required in Mitigation Measure C.4b; • a review of the results of any subsurface investigations of the Quarry property that have been conducted since the last report;	**Mitigation Monitoring and Reporting Measure C.4c:** the Periodic Hydraulic Report described in Mitigation Measure C.4c will be submitted to San Mateo County Planning Department as part of the application for each 5-year permit renewal, and prior to implementation of each proposed mining phase.	Each five years, at time of application for permit renewal; and one year prior to the proposed implementation of each mining phase.	Verified by San Mateo County Planning Department.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Hydrology and Water Quality (cont.)				
Impact C.4 (cont.)	• a review of the periodic Water System Annual Monitoring Report prepared pursuant to Mitigation Measure C.5c; • the results of additional field investigations undertaken in preparation of the report necessary to characterize then-existing surface and groundwater hydrology conditions; and • an analysis of the likely short-term (5-year) and long-term impacts of future mining on Nuff Creek baseflows. If the applicant fails to obtain a permit to divert and store water from Nuff Creek, or if the Water System Operation and Management Plan fails to demonstrate that baseflows can be maintained by releasing water from a water storage facility, or if the Periodic Hydraulic Report indicates that future mining will adversely affect baseflows, then the applicant shall cease mining in the area determined to be adversely affecting baseflows, and shall prepare an application to amend its Mining and Reclamation Plan to avoid creation of a groundwater gradient from Nuff Creek into an adjoining mining pit or water storage facility. This may include modification of the final grading plan to avoid creating a deep pit in close proximity to the creek. Such a modification of the Mining and Reclamation Plan may be subject to additional environmental review under CEQA and County approval.			
Impact C.5: Operation of the proposed water diversion, storage, and release facilities could affect the natural hydrograph and water quality of Nuff Creek. (Less than Significant with mitigation)	**Mitigation Measure C.5a:** The applicant shall manage diversion and storage of water from Nuff Creek in a manner that does not diminish water quality or streamflows in Nuff Creek or Pilarcitos Creek. The applicant shall prepare an application to the SWRCB for appropriative water rights to divert and store water from Nuff Creek. The appropriative water rights application shall include the information in Mitigation Measure C.5b, and shall demonstrate how diversion and storage of water from Nuff Creek will be accomplished without violating Basin Plan water quality standards, and without adversely affecting the natural hydrograph of Nuff Creek. Prior to diverting and storing any water from Nuff Creek, the applicant shall demonstrate to San Mateo County that it has received all necessary permits	**Mitigation Monitoring and Reporting Measure C.5a** Within two years of final Project approval, the applicant shall provide San Mateo County Planning Department with a copy of the completed Application for Appropriative Water Rights. The application will include the site- specific study, the Water System Operation and Management Plan, and the Water System Operation Monitoring and Reporting Program described in Mitigation Measure C.5b. All	Within two years of final Project approval.	Verified by the San Mateo County Planning Department, upon receipt of water rights application and SWRCB decision on water rights.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Hydrology and Water Quality (cont.)				
Impact C.5 (cont.)	and approvals, including permits from CDFG, NMFS, RWQCB, ACOE, and the SWRCB. If the applicant does not receive a permit to appropriate and store water from the SWRCB, or if it cannot demonstrate that water diversion, storage, and release back to the natural stream system can be accomplished in a manner that protects and maintains water quality and the natural hydrograph of Nuff Creek, then the applicant shall not divert nor store water from Nuff Creek. In this case, the applicant shall prepare an application to amend the Mining and Reclamation Plan to eliminate or modify the water diversion and storage system. Any such revision may be subject to additional environmental review under CEQA and County approval.	subsequent correspondence between the applicant and the SWRCB will be copied to the County.		
	Mitigation Measure C.5b: As a part of the water rights application specified in the previous mitigation measure, and in accordance with the CDFG/NMFS Draft Guidelines for proposed large diversions from streams in watersheds that currently or historically contained anadromous salmonids, the applicant shall consult with NMFS and CDFG to plan and conduct a site-specific study for the purpose of determining appropriate flow-related terms and conditions to be incorporated in the permitted water right. At a minimum, the study shall include the following (the first four requirements are from the Guidelines; the remainder were added in this EIR): 1. A habitat-based stream needs assessment that incorporates habitat, species, and life history criteria specific to each diverted stream or stream reach; 2. An evaluation of the existing level of impairment (diversion) and limiting factors for salmonid restoration based upon habitat, species, and life history-specific criteria for each diverted stream or stream reach; 3. A specific proposal to provide periodic channel maintenance and flushing flows that are representative of the natural hydrograph; and 4. A plan to monitor the effectiveness of stipulated flows and procedures for making subsequent modification, if necessary.	See **Mitigation Monitoring and Reporting Measure C.5a**.		

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Hydrology and Water Quality (cont.)				
Impact C.5 (cont.)	5. A water balance model for the planned diversion, storage, and release of water that includes calculations for water balance during very dry, dry, normal, wet, and very wet years, both during initial filling of each proposed water storage facility as well as during its subsequent operation. 6. Modeling of water temperature, temperature stratification, and water quality in the proposed water storage facilities and in water released to Nuff Creek. 7. A plan for operation of water diversion, storage, and releases (Water System Operation and Management Plan) that includes consideration of how water will be managed during very dry, dry, normal, wet, and very wet years, both during initial filling of the proposed water storage facilities as well as during their ongoing operation, and that demonstrates how the applicant will maintain water quality and the natural hydrograph of Nuff Creek. The Water System Operation and Management Plan will be implemented as the guidance document for management of the water diversion, storage, and release system. 8. Description of a program for continuous monitoring and periodic reporting of the operation of the water diversion, storage, and release system (Water System Operation Monitoring and Reporting Program). The Water System Monitoring and Reporting Program will be a component of the Water System Operation and Management Plan. The ongoing monitoring shall include, at a minimum, monitoring of diversion volumes, water storage volumes, and release volumes; water quality of diverted, stored, and released water.			
	Mitigation Measure C.5c: During each year of mining and reclamation following approval of the Project, the applicant shall prepare and submit to San Mateo County, CDFG, NMFS, RWQCB, and the SWRCB, an annual report of the results and analysis of the Water System Monitoring and Reporting Program (Water System Annual Monitoring Report). The Water System Annual Monitoring Report will present an analysis of the effects of the water management	**Mitigation Monitoring and Reporting Measure C.5c:** The applicant shall submit to the San Mateo County Planning Department the reports described in Mitigation Measure C.5c (Water System Annual Monitoring Report; Water System Operation Five-	Annual reports will be due by December 31 of each year, to cover the previous water year (October 1 – September 30); the first Five-Year report will be due with submittal of the	Verified by San Mateo County Planning Department, upon receipt of each report; also verified by CDFG, NMFS, RWQCB, and SWRCB.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Hydrology and Water Quality (cont.)				
Impact C.5 (cont.)	system on water quality and the natural hydrograph of Nuff Creek and Pilarcitos Creek. It will incorporate the Annual Streamflow Monitoring Report prepared pursuant to Mitigation Measure C.4b and the Periodic Hydraulic Report prepared pursuant to Mitigation Measure C.4c. Each five years, during the County's consideration of the five-year renewal of the mining permit, and also prior to implementation of each mining phase, the applicant shall prepare a comprehensive report (Water System Operation Five-Year Monitoring Report or Water System Operation Next Mining Phase Monitoring Report) that includes the same elements as the Water System Annual Monitoring Report, but that also includes an analysis of trends and likely impacts of future short-term (five year) and long-term mining on Nuff Creek baseflows and water quality. Should a monitoring report indicate that mining has had, or is likely to have, an adverse effect on Nuff Creek base flows or water quality, the applicant will, in consultation with the pertinent agencies, seek to modify the Water System Operation and Management Plan and resulting water systems operation, as well as any permits that pertain to this system, to ensure that baseflow and water quality in Nuff Creek are not adversely affected.	Year Monitoring Report; and Water System Operation Next Mining Phase Monitoring Report).	application for each five-year permit renewal; the Next Mining Phase report will be due one year prior to the anticipated start of each mining and reclamation phase.	
Impact C.6: Mining of Areas A and B could intercept groundwater from beneath the Ox Mountain Landfill, resulting in contamination of ground and surface water in the proposed mining pits, water storage facilities, and Nuff Creek, or depletion of regional groundwater storage. (Less than Significant with mitigation)	**Mitigation Measure C.6a:** The applicant shall conduct mining in a manner that avoids interception of contaminated groundwater from the Ox Mountain Landfill, and that avoids interception of Montara Mountain regional groundwater, such that there is no contamination of ground and surface water in the proposed mining pits, water storage facilities, and Nuff Creek; and so that regional groundwater storage is not depleted. Prior to any mining in proposed expansion Areas A, B, or the area in-between, the applicant shall perform a detailed subsurface investigation of the potential for mining in this area to intercept groundwater flow from beneath the Ox Mountain Landfill, or to intercept regional groundwater from open bedrock joints. Requirements for this investigation are presented in Mitigation Measure C.6b. If the investigation	**Mitigation Monitoring and Reporting Measure C.6a:** Along with the Areas A and B Hydrogeologic Report described in Mitigation Measure C.6a, the applicant shall submit a letter to the Director of San Mateo County Planning Department, Areas A and B Hydrogeologic Report and describing what, if any, course of action will be taken to avoid interception of contaminated groundwater from the Ox Mountain Landfill or interception of regional groundwater.	Prior to commencement of mining of areas A or B, and prior to each mining and reclamation phase thereafter.	Verified by the San Mateo County Planning Department and the RWQCB, upon receipt of letter and report.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Hydrology and Water Quality (cont.)				
Impact C.6 (cont.)	confirms the potential for interception of regional groundwater, the applicant shall not implement the Mining and Reclamation Plan, but shall prepare an application for an amendment of the Mining and Reclamation Plan that demonstrates how mining will occur without interception of regional groundwater. This may require foregoing mining of all or a portion of Area A or B, or mining only to a shallower depth. If the investigation confirms the potential for mining to intercept groundwater flow from beneath the Ox Mountain Landfill, the applicant shall do one of the following: a) prepare an application for amendment of the Mining and Reclamation Plan that demonstrates how mining will avoid this occurrence. This may require foregoing mining of all or a portion of Area A or B, or mining only to a shallower depth. b) undertake the groundwater monitoring plan and contingency plan specified in Mitigation Measures C.6c and C.6d, for detecting and preventing the contamination of ground or surface water in Nuff Creek Canyon.			
	Mitigation Measure C.6b: The subsurface investigation specified above shall be conducted by a California-certified hydrogeologist, and shall be used to delineate bedrock fractures and evaluate potential groundwater flows. The subsurface investigation shall include the development of one or more exploratory boreholes drilled to the maximum depth of the proposed A+B pit, in the center location of the pit and in line with the inferred east-west jointing shown in Figure IV.C-4. The number and depth of boreholes shall be determined by the supervising hydrogeologist to be sufficient to characterize bedrock fracturing, jointing, and groundwater conditions. Optical (or acoustic) televiewer method shall be used in addition to other methods, as deemed appropriate by the hydrogeologist supervising the investigation. The borehole(s) shall also be pumped and sampled for general minerals and the same constituents as required by the RWQCB for the ridgeline monitoring wells. Groundwater levels shall be	**Mitigation Monitoring and Reporting Measure C.6b:** The applicant shall submit the required Areas A and B Hydrogeologic Report to the San Mateo County Planning Department and the RWQCB prior to commencement of mining of areas A or B. Areas A and B Hydrogeologic Report Updates will be submitted prior to the commencement of each mining and reclamation phase.	Prior to commencement of mining of areas A or B, and prior to each mining and reclamation phase.	Verified by the San Mateo County Planning Department and the RWQCB, upon receipt of required reports.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Hydrology and Water Quality (cont.)				
Impact C.6 (cont.)	monitored to quantify the seasonal and year-to-year variation. Other metrics reasonably deemed warranted by the supervisory hydrogeologist to identify operational choices shall be characterized, such as but not limited to specific conductance or aquifer properties. Results shall be presented in a Hydrogeologic Report. The Hydrogeologic Report shall make recommendations for monitoring protocols. The report shall be sent to the San Mateo County Planning department and the RWQCB prior to the commencement of mining in Areas A or B. A new subsurface investigation, using the same or equivalent methods, and conducted by a California-certified hydrogeologist, shall be conducted prior to commencing each mining phase, and its results presented in a Hydrogeologic Report Update, which shall be used to confirm or modify the findings of the original investigation. The Hydrogeologic Report Update shall be submitted to the San Mateo County Planning Department and the RWQCB.			
	Mitigation Measure C.6c: Irrespective of the findings of the subsurface investigation prepared pursuant to Mitigation Measure C.6b, and prior to commencing mining in Areas A or B, the applicant shall prepare and implement a groundwater monitoring and control program, that consists of the following: a) ***Baseline groundwater monitoring*.** The applicant shall install an additional monitoring well on the ridge along the east-west fracture orientation between the new fill area and the proposed quarry Areas A and B (identified in Figure IV.C-4). The applicant shall monitor groundwater elevations and seasonal fluctuation in the well. Monitoring may be conducted either (a) monthly, with semi-annual reporting, or (b) with continuous recorders, downloaded and reported semi-annually. During the initial two years, the well shall be sampled quarterly for general minerals and the same constituents as required by the RWQCB for the adjoining ridgeline wells. At the end of two years, a hydrogeologic monitoring report (Baseline Hydrogeologic Monitoring Report) shall be	**Mitigation Monitoring and Reporting Measure C.6c:** Prior to the commencement of mining in areas A or B, the applicant shall submit to the San Mateo County Planning Department and the RWQCB a Report of Areas A and B Groundwater Monitoring Wells Installation described in Mitigation Measure C.6c. The report will include a monitoring schedule and protocols. The applicant shall also submit the Semi-Annual Report of Areas A and B Groundwater Monitoring. Two years after monitoring well installation, the applicant shall submit the Areas A and B Baseline Hydrogeologic Monitoring Report, including the Areas A and B Seepage	Monitoring well installation and report due prior to commencement of mining in Areas A or B; Baseline reports due two years thereafter; Annual reports due by December 31 of each year; semi-annual reports due June 30 and December 31 of each year.	Verified by the San Mateo County Planning Department and the RWQCB, upon receipt of required reports.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Hydrology and Water Quality (cont.)				
Impact C.6 (cont.)	submitted by the applicant, establishing a baseline for seasonal and year-to-year water-level fluctuations and concentrations of key indicator constituents. Future changes shall be compared to the baseline in an Annual Hydrogeologic Monitoring Report. Monitoring shall continue beyond the baseline period as recommended in the Baseline Hydrogeologic Monitoring Report, but no less than quarterly monitoring for water level in the well. The Baseline Hydrogeologic Monitoring Report shall also identify those events or conditions (such as following a significant earthquake) when special monitoring or sampling shall be conducted. b) ***Seepage monitoring.*** As pits A and B are mined and significant fracture seepage rates encountered, the applicant shall monitor seepage flow rates using the most appropriate method, such as a minimum of one continuously-recording weir or gage at a central collection point, supplemented with spot observations from individual sources. During the initial two years of gaging seepage flow rate, the seepage will be sampled quarterly for the same constituents as ridge well. Records from the first two years of monitoring shall be reported in a supplement to the Baseline Hydrogeologic Monitoring Report. Seepage monitoring shall continue until the pits are decommissioned and reclaimed, and shall be reported in an Annual Hydrogeologic Monitoring Report. The Baseline Hydrogeologic Monitoring Report seepage supplement shall specify continuing monitoring protocols, which shall be implemented as part of the ongoing seepage monitoring program. c) ***Seepage control.*** If fracture seepage and groundwater flow conditions are identified that suggest a potential for the flow of contaminated groundwater to the quarry, then the applicant shall revise the groundwater and seepage monitoring protocols recommended in the Baseline Hydrogeologic Monitoring Report and seepage supplement, and develop a plan for controlling seepage into the mining area. The Seepage Control Plan	Monitoring Supplement described in the mitigation measure. Each year thereafter, the applicant shall submit the Annual Areas A and B Hydrogeologic Monitoring Report, including the Areas A and B Seepage Monitoring Supplement. If necessary, as described in Mitigation Measure C.6c(c), the applicant shall submit a Areas A and B Seepage Control Plan.		

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Hydrology and Water Quality (cont.)				
Impact C.6 (cont.)	shall demonstrate how the applicant will control seepage in order to protect surface and groundwater quality, such that no degradation of surface or groundwater quality occurs. The Seepage Control Plan may specify pumping and returning leachate-contaminated groundwater to the landfill, or treating and releasing it to on-site storage ponds, or other programs meeting the approval of the RWQCB and the County. The Seepage Control Plan shall also consider seepage effects at final reclamation. Five-year continuing use permit renewals for Area A+B shall be contingent on a finding that water levels and quality are consistent with those predicted from the baseline period, or that the applicant is able to sustain the intended beneficial uses for flow releases. d) The applicant shall obtain copies of the semiannual reporting of water quality sampling at the landfill, and identify trends as they relate to potential contaminants to groundwater that may affect seepage to the proposed quarry area. e) The applicant shall report monitoring results and hydrogeologic interpretation of the data to the County annually in the Annual Hydrogeologic Monitoring Report, including post-episodic event special monitoring as described in (a) above.			
	Mitigation Measure C.6d: If contaminated groundwater is detected flowing toward Nuff Creek, the applicant shall immediately inform the San Mateo County Planning Department and the RWQCB, and, in consultation with the RWQCB, shall take measures to address this condition. Measures may include pumping and treating contaminated groundwater, or capturing and impounding groundwater if it emerges to the surface. Any discharge of contaminated or treated water would require the approval of the RWQCB.	**Mitigation Monitoring and Reporting Measure C.6d:** The applicant shall immediately inform the San Mateo County Planning Department and the RWQCB if contaminated groundwater is detected flowing toward Nuff Creek, and shall consult with them on an Areas A and B Contaminated Groundwater Remediation Plan.	Immediately upon detection of contaminated groundwater flowing toward Nuff Creek.	Verified by the San Mateo County Planning Department and the RWQCB, if and when notified.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Hydrology and Water Quality (cont.)				
Impact C.7: Continued pumping of groundwater from the three onsite wells could cause drawdown or lowering of local groundwater levels. (Less than Significant with mitigation)	**Mitigation Measure C.7a:** The applicant currently uses water from sediment ponds, in addition to well water, for aggregate washing, and recycles this water. The applicant states that approximately 95% of wash water is recycled. This practice would continue under the Project, thereby limiting the demand for well water.	**Mitigation Monitoring and Reporting Measure C.7a**: The applicant shall submit an Annual Report of Wash Water Use and Disposal to the San Mateo County Planning Department the volume of water, and the percent recycled water, used as wash water, as well as the disposition of wash water.	Reported annually by the end of the calendar year.	Verified by San Mateo County Planning Department, upon receipt of annual report.
	Mitigation Measure C.7b: Upon Final Project approval, the applicant shall immediately implement a groundwater level/groundwater metering program to gather baseline data on groundwater use and the effects to the underlying aquifer. On a quarterly basis, the applicant shall measure groundwater level in the two onsite production wells and record the amount of groundwater used from each well (metering is typically accomplished using a totalizing meter on the well discharge). This data shall be collected on a quarterly basis for the entire Project duration. If, at some point during the Project operational period, the data indicates that groundwater levels, under average pumping rates, are decreasing, on a continuous trend not related to seasonal fluctuation or drought conditions, the applicant shall decrease pumping until the water levels are shown to equilibrate (typically over a period of three quarters). If the decrease in pumping results in groundwater volumes insufficient for Project operations, the applicant shall either use less water in the processing, alter the pumping and storage schedules, increase storage capacity, or secure other water sources (e.g. using water stored in sediment basins or in the water storage facilities). Groundwater level and metering data shall be collected and reviewed on a quarterly basis by a California-Certified Hydrogeologist. If a trend of decreasing water levels is identified, the applicant shall report the findings to San Mateo County and remedial actions, including but not limited to those describe above, shall be determined and implemented.	**Mitigation Monitoring and Reporting Measure C.7b**: The applicant shall provide the San Mateo County Planning Department an Annual Report of Quarterly Groundwater Monitoring. The report will be due by the end of the calendar year. The report will include a summary of trends in groundwater levels, and any actions being taken or planned to equilibrate groundwater levels.	Reported annually by the end of the calendar year.	Verified by San Mateo County Planning Department, upon receipt of annual report.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Hydrology and Water Quality (cont.)				
Impact C.8: Mining of proposed expansion Area A+B would substantially alter the existing drainage pattern of the site or area through the alteration of the course of a stream, and could result in substantial erosion or siltation on or off the site, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off the site. (Less than Significant with mitigation)	The mitigation measures identified in this report for Impacts B.1 through B.8 in Section 3.B, Geology, Soils, and Seismicity will mitigate this impact.	See **Mitigation Monitoring and Reporting Measures B.1 through B.8**.		
Biological Resources				
I**mpact D.1:** Project activities have the potential for direct take of several special-status plant species including: Santa Cruz manzanita, Montara manzanita, California bottle-brush grass, western leatherwood, and San Mateo tree lupine. (Less than Significant with mitigation)	**Mitigation Measure D.1: *Western Leatherwood Avoidance*.** During the clearing of vegetation from the expansion area, a biological monitor familiar with western leatherwood shall work with the vegetation clearing crew. Heavy equipment shall clear the vegetation from one or more transects to provide the monitor access. The biological monitor shall survey the vegetation along the transect edges for western leatherwood, and if none are found will give authorization to continue clearing. If rare plants are found in the expansion area, the plant population shall be protected by a 50-foot buffer and protected with construction fencing, and worker training on avoidance shall be conducted. If plants are found and cannot be avoided then appropriate mitigation measures shall be developed in consultation with USFWS and CDFG. Specific measures may include, but not necessarily be limited to: • Collection of seed from plants that cannot be avoided by the Project. The seed could be donated to a seed bank in order to preserve the genetic line represented by the lost plants. The seed could also be propagated and the resulting plants used in local revegetation or mitigation Projects. • Salvage and transplanting of plants that would be destroyed by quarry activities. Plants could be transplanted to areas within the Project area and incorporated into the Reclamation Plan.	**Mitigation Monitoring and Reporting Measure D.1:** Prior to clearing of vegetation from mining expansion areas, the applicant shall inform the San Mateo County Planning Department, CDFG, and USFWS of its selection of a biological monitor, and will provide the Department with a Special-Status Plant Species Pre-construction Survey Work Plan for the monitor. The monitor will prepare daily monitoring reports, which will be attached to a Special-Status Plant Species Monitoring Report to be submitted to the Department and the USFWS upon completion of the vegetation clearing. This report will include details on any incidence of special-status plant species encountered, actions taken to protect special status plants, the effectiveness of such actions, and any mitigation measures taken to salvage or replace damaged or destroyed plants.	Selection of biological monitor and submittal of Work Plan prior to clearing of new areas for mining or mining-related activities under the Project; Monitoring Report due within 14 days of completion of clearing activities.	Verified by San Mateo County Planning Department, CDFG, and USFWS, upon selection of a biological monitor and submittal of final monitoring reports.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
I**mpact D.1** (cont.)	• Seed collection, plant salvage, and any propagation shall be carried out by a qualified botanist, plant ecologist, or native plant horticulturist.			
Impact D.2: Project activities could result in substantial adverse impacts to California red-legged frog and San Francisco garter snake. (Less than Significant with mitigation)	**Mitigation Measure D.2a: *CRLF and SFGS Avoidance and Minimization*.** Unless otherwise mentioned, the following measures are taken from Appendix H of LSA's *Mining and Reclamation Plan* (LSA, 2009), which includes a summary of the Habitat Conservation Plan that is planned for the Pilarcitos Quarry Expansion Project. 1. *Standard Preconstruction Requirements*. The following measures will be implemented prior to all ground-disturbance activities, including clearing and grubbing in expansion areas, and are adopted from and incorporate the standard protection measures outlined in *Programmatic Formal Endangered Species Act Consultation on Issuance of Permits under Section 404 of the Clean Water Act or Authorizations under the Nationwide Permit Program for Projects that May Affect the California Red-legged Frog* (USFWS letter report, dated January 26, 1999): (a) Prior to the approval of any expansion activities, the Project proponent will submit the name(s) and credentials of biologists who will conduct activities associated with CRLF. No Project activities will begin until the Project proponent has received written approval from the USFWS. (b) All workers who work within the currently active quarry or future expansion areas will be required to attend an employee education and awareness training program. At a minimum, the training shall include: a description of the CRLF, SFGS, steelhead, marbled murrelet, and other covered species, and their habitat requirements; and the general measures that are being implemented to conserve these species as they related to day-to-day quarry operations and future quarry expansion. A training manual including all the information presented in the training program will be available for the employees, so they can review the material whenever necessary.	**Mitigation Monitoring and Reporting Measure D.2a.1**: Prior to land disturbance in each expansion area, the applicant shall inform the San Mateo County Planning Department, CDFG, and USFWS of its selection of a biological monitor, and will provide the Department with a California Red-legged Frog Pre-construction Survey and Construction Monitoring Work Plan for implementation of Mitigation Measure D.2a.1a, 1b, 1c, and 1h. The Work Plan will include a schedule for carrying out the tasks specified, and report dates and topics. In addition, following ground disturbing activities, the applicant shall submit to the San Mateo County Planning Department, CDFG, and USFWS a Report of California Red-legged Frog Protection Measures, detailing compliance with measures D.2a.1d, 1e, 1f, and 1g.	Prior to the commencement of each mining phase, and during any land-clearing activities.	Verified by San Mateo County Planning Department, CDFG, and USFWS, upon applicant's submittal of stated Work Plan and Report.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
I**mpact D.2** (cont.)	(c) A USFWS-approved biologist shall be present at all expansion areas until the removal of CRLF, instruction of workers, and initial habitat disturbance (such as vegetation clearance) is complete. After that time, the quarry operator shall designate a person to monitor on-site-compliance with all minimization measures. The USFWS-approved biologist and subsequent monitor shall have the authority to halt any actions that might result in impacts to CRLF or SFGS exceeding levels anticipated by the Corps and/or USFWS. (d) In order to avoid attracting predators during quarry expansion and operation activities, all food trash will be properly contained, removed from the work site, and disposed of regularly. (e) All fueling and maintenance of vehicles and other equipment, and staging areas, will be located at least 20 meters (60 feet) from ponds with CRLF, Nuff Creek, and associated tributaries. The applicant will also prepare a Plan to allow a prompt and effective response to any accidental spills into these aquatic habitats. All workers will be informed of the importance of preventing spills and the appropriate measures to take should a spill occur. (f) The number of access routes, number and size of staging areas, and the total area of the activity will be limited to the minimum necessary to complete the quarry expansion. Routes and boundaries will be clearly demarcated, and these areas will be located outside ESHAs. (g) To control erosion during and after quarrying operations, the Project proponent will implement best management practices, as identified by Pilarcitos Quarry's *Storm Water Pollution Prevention Plan*. (h) A USFWS-approved biologist will permanently remove any exotic wildlife species from the Project site, such as bullfrogs and crayfish, to the extent possible.			

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
I**mpact D.2** (cont.)	2. Quarry Operations/Water Management. Operation and management of existing and new quarry ponds shall adhere to the following: (a) All ponds within the quarry that support suitable habitat for frogs will be surveyed at least twice annually to monitor the status of CRLF in the ponds. A late winter/early spring (February to March) survey will be conducted to determine if frogs are breeding in any given pond, and a late summer (August to September) survey will be conducted to determine the status of tadpoles and/or metamorphs in the ponds. SFGS surveys will be conducted concurrent with these CRLF surveys. (b) Quarry managers will develop an annual pond operations plan detailing what actions (e.g., dewatering, sediment removal, mining, pond removal or relocation, slurry storage, etc.) are planned for a given quarry pond over the coming year. To the greatest extent practicable, work in ponds that could have adverse effects on CRLF will be scheduled for the fall when ponds have naturally dried and/or adults and metamorphs have dispersed from the pond. (c) If CRLF tadpoles are present in ponds where dewatering scheduled to occur, work will be rescheduled until tadpoles have transformed and metamorphs have dispersed. If adults are present in a pond after tadpoles have transformed and metamorphs have dispersed, the pond may be dewatered over several days and nights; this will provide time for adults to disperse away from the pond as it dries. The intakes of pipes, used to draw water from ponds, will be covered with a 0.25-inch screen, and the intake ends placed in perforated 10-gallon buckets filled with coarse gravel. This will prevent frogs from being sucked into intakes. (d) Quarry ponds that are scheduled for a given action that could adversely affect frogs, tadpoles, and/or their egg masses will be surveyed by a USFWS-approved biologist (see below) within one week of the scheduled action to determine the status of frogs	**Mitigation Monitoring and Reporting Measure D.2a.2**: After final Project approval, but prior to the commencement of any Project mining or reclamation activities, the applicant shall submit to the San Mateo County Planning Department, CDFG, and USFWS the Pond Operations Plan specified in Mitigation Measures D.2a and D.2b. The Plan will become a part of a conforming Mining and Reclamation Plan, to be reviewed and approved by San Mateo County prior to the commencement of any activities under the Project. The Plan shall be updated and re-submitted at the time of each five-year permit renewal. In addition, each year, the applicant shall submit a Report of Pond Operations Plan Implementation.	Within 60 days of final Project approval, and prior to Project implementation; updates at the time of submittal of application for permit renewal. Report of Pond Operations Plan Implementation due annually by December 31.	Verified by San Mateo County Planning Department, CDFG, and USFWS, upon receipt of Plan, Plan revisions, and annual report.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
Impact D.2 (cont.)	in the pond, regardless of whether CRLF were found during annual frog surveys. SFGS surveys will be conducted concurrent with these CRLF surveys. (e) To the maximum extent practicable given rainfall patterns and sediment/stormwater retention requirements, water level in the ponds within the active quarry and processing areas will be kept dry or ponding limited to a maximum of 24 hours during the frog breeding season. Ponds shall also be regularly maintained to preclude the establishment of aquatic vegetation. (f) If an emergency action is required at a given quarry pond, a USFWS-approved biologist (see below) will conduct surveys for CRLF and SFGS before the onset of quarry operations at the given pond. If CRLF or SFGS are present, the approved biologist will contact the USFWS to determine if moving any of these life stages is appropriate. Only USFWS-approved biologists will participate in activities associated with the capture, handling, and monitoring of CRLF. If SFGS is observed, construction activities in the immediate area will be delayed until the species has left the area on its own volition - the biologist will not move the snake.			
	Mitigation Measure D.2b: CRLF *Avoidance and Minimization Measures for expansion area H.* The following measures are taken from LSA's *Mitigation and Monitoring Plan Pilarcitos Quarry (Expansion Area 2)* (2007) and shall apply to Project activities in expansion area H, in addition to the above avoidance and mitigation measures: (a) Although CRLF movement to and from ponds within Pilarcitos Quarry is likely to occur primarily at night when the quarry will not be in operation, a gate will be placed across the road running west of the pond in expansion area H, at its injunction with the main quarry access road. This will restrict traffic on the road adjacent to the pond that is a presumed breeding site, and that will be enhanced under (3), below.	**Mitigation Monitoring and Reporting Measure D.2b:** The applicant shall provide the San Mateo County Planning Department, CDFG, and USFWS a Plan for CRLF Exclusion Fencing, as specified in Mitigation Measure D.2b. This will include construction details, drawings, and photographs of the required gate and exclusion fencing. A Report of CRLF Fence Installation will also be provided following fence completion.	Prior to disturbance of Area H.	Verified by San Mateo County Planning Department, CDFG, and USFWS, prior to disturbance of expansion Area H.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
I**mpact D.2** (cont.)	(b) Exclusion silt fencing will be placed along both sides of the rock chute between expansion area H and the quarry processing area, to keep CRLF out of areas where they are in danger of being crushed by falling rock.			
	Mitigation Measure D.2c: *CRLF and SFGS Habitat Enhancement and Monitoring*. The following CRLF habitat enhancement and monitoring measures were taken from LSA's *Mining and Reclamation Plan* (LSA, 2009), and shall help mitigate potential CRLF impacts at Pilarcitos Quarry. These measures would also enhance habitat for SFGS, if present – SFGS prey on CRLF, so more habitat and a corresponding increase in CRLF would feasibly result in a greater food supply and increase in SFGS. 1. <u>CRLF and SFGS Aquatic Habitat Enhancement</u>. CRLF habitat will be enhanced in the Project site through several measures: (a) The small sediment pond in expansion area H will be enhanced. (b) Three breeding ponds will be constructed in the upper portion of Nuff Creek (in the 210-acre conservation easement that is part of the proposed HCP, and discussed under Mitigation Measure D.3d). Each pond will be 12 to 15 feet wide and 35 to 45 feet long, and is expected to provide breeding habitat for 4 to 8 pairs of frogs and hydration and foraging habitat for numerous juveniles and transient adults. These ponds will help mitigate for managing ponds in the active processing plant and storage area in a way that precludes CRLF breeding activity. SFGS habitat will be improved by permanently placing two to three cover-boards of 0.5-inch plywood (2.5 by 3 feet) in open areas near the constructed ponds. Cover-boards are attractive to snakes, which provide them with a concealed space to thermoregulate and hide from predators. The cover-boards will be numbered and mapped with a	**Mitigation Monitoring and Reporting Measure D2c.1:** Mitigation Measure D.2c.1 overlaps with Area H Conditions of Approval 4, 5, and 6; implementation of this measure will be coordinated with implementation of these conditions to avoid duplication and conflict. The applicant shall prepare and submit to San Mateo County Planning Department, CDFG, and USFWS, a CRLF Habitat Enhancement Plan for enhancing existing and constructing new ponds, as specified in the mitigation measure and in the Area H Conditions of Approval. In addition, the applicant shall provide a Notice of CRLF Enhancement Plan Implementation describing the enhancement and construction of ponds specified in the plan.	Within one year of the commencement of mining activities in Area H.	Verified by San Mateo County Planning Department, USFWS, and CDFG, upon receipt of plans and notice of implementation.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
I**mpact D.2** (cont.)	GPS unit, and periodically checked for snakes. The results of the cover-board monitoring will be included in an annual report. (c) New breeding ponds and adjacent marsh habitat will be created during quarry restoration activities in Areas I, H, and J. These ponds will use design parameters similar to those used for the three breeding ponds in the 210-acre conservation easement, above. (d) Small water catchments will be constructed at selected seeps that are present in potential frog movement corridors. This pond restoration and enhancement program will likely increase the value of the Nuff Creek watershed for CRLF, by significantly increasing the amount and distribution of breeding habitat within the watershed. (e) Approximately 350 feet of Nuff Creek and buffer will be restored through Pilarcitos Quarry, as described in Mitigation Measure D.10. This section of creek shall be designed to create suitable habitat for CRLF by creating meanders in the channel and both in- and off-channel pools. Nuff Creek will provide potential dispersal and aquatic habitat for CRLF, and the off-channel pools will provide potential breeding habitat for CRLF and other native amphibians.			
	2. Monitoring of CRLF. Annual surveys for frogs will be conducted at active quarry ponds and the ponds created in the conservation easement, as described in *Appendix H of the Mining and Reclamation Plan* (LSA, 2009), with details on the monitoring provided in LSA's *Mitigation and Monitoring Plan Pilarcitos Quarry (Expansion Area 2)* (2007). Surveys will occur late winter/early spring during weather that is favorable for frog activity, and will consist of two daytime and two nighttime visual encounter surveys. The monitoring will attempt to: (1) document colonization/use of the created and enhanced ponds by CRLF; (2) estimate numbers of adult CRLF using the ponds; and (3) monitor breeding activity. In addition, the	**Mitigation Monitoring and Reporting Measure D.2c.2:** Mitigation Measure D.2c.2 overlaps with Area H Condition of Approval 26, and will be coordinated with implementation of this condition. The applicant shall provide an Annual Report of CRLF Surveys detailing the results of the annual survey and any additional CRLF surveys by December 31 of each year following final Project approval.	By December 31 of each year.	Verified by San Mateo County Planning Department, USFWS, and CDFG, upon receipt of Annual Report.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
I**mpact D.2** (cont.)	physical features of the ponds, changes in vegetation, and water level will be assessed during the monitoring visits. A staff gage will be placed in the deepest portion of the ponds to allow water depth to be accurately recorded during monitoring visits. Photographs of the pond and adjacent area will be taken during each monitoring visit to provide a record of changes in vegetation coverage and water levels. The presence of other amphibians will be noted during monitoring visits including information on species, estimate of numbers, and life cycle (i.e., eggs, larvae, metamorphs, and adults). Visual SFGS surveys will be conducted during these CRLF surveys, and any observances documented. An annual report will be completed to summarize each year's monitoring activities and findings.			
	Mitigation Measure D.2d: *Conservation of CRLF and SFGS Habitat.* As part of the HCP for the proposed Pilarcitos Quarry Expansion Project (summarized in Appendix H of the *Mining and Reclamation Plan* (LSA, 2009), the applicant will create a 210-acre conservation easement in the northern portion of the quarry property, which contains potential dispersal habitat and will contain created aquatic habitat for the CRLF, as well as potential habitat for SFGS.	**Mitigation Monitoring and Reporting Measure D.2d:** The applicant has already established a 192.5 acre conservation easement in the northern portion of the quarry property. As the applicant adds land to the conservation easement, this shall be reported to the San Mateo County Planning Department in a Report of Conservation Easement Expansion.	Upon future addition of land to the existing conservation easement.	Verified by San Mateo County Planning Department, upon receipt of report from the applicant.
	Mitigation Measure D.2e: *Exclusion Fencing*. A snake and frog-proof barrier shall be placed around the perimeter of each mining expansion area prior to ground disturbance. All fence designs and locations shall he provided to the Service for approval at least 10 working days prior to installation. All exclusion fencing shall be checked regularly and maintained in good working order.	**Mitigation Monitoring and Reporting Measure D.2e:** Prior to new ground disturbance in any mine expansion area, the applicant shall submit to the San Mateo County Planning Department, CDFG, and USFWS, CRLF Exclusion Fencing Plans described in Mitigation Measure D.2e. A Report of CRLF Fence Installation will also be provided following fence completion.	Prior to commencement of disturbance in each new expansion area.	Verified by San Mateo County Planning Department, USFWS, and CDFG, prior to disturbance of new areas.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
Impact D.3: Project activities could result in substantial adverse effects on the marbled murrelet. (Less than Significant with mitigation)	**Mitigation Measure D.3a: *Marbled Murrelet Surveys*.** As part of the Habitat Conservation Plan, which is summarized in the *Mining and Reclamation Plan* (LSA, 2009), the applicant will minimize potential impacts to the marbled murrelet through two measures: (a) Create a 210-acre conservation easement in the northern portion of the Project area. Although marbled murrelets are not currently known to nest in this area, it will preserve a buffer of habitat between the marbled murrelet nesting area in the Pilarcitos drainage, east of the proposed quarry expansion activities, and the Ox Mountain Landfill and Pilarcitos Quarry. (b) Conduct USFWS- and CDFG-protocol-level surveys for marbled murrelet every 10 years. This will involve conducting seven protocol surveys per year over a consecutive two-year period. A report providing the methods and results of the surveys will be submitted to the USFWS and CDFG, for each year that surveys are conducted.	**Mitigation Monitoring and Reporting Measure D.3a:** The applicant has already established a 192.5 acre conservation easement in the northern portion of the quarry property. As the applicant adds land to the conservation easement, this shall be reported to the San Mateo County Planning Department (see Mitigation Monitoring and Reporting Measure D.2d). In addition, following final Project approval, but before commencement of any mining or reclamation activities under the Project, the applicant shall submit a Schedule for Future Marbled Murrelet Surveys to USFWS, CDFG, and the San Mateo County Planning Department. A Marbled Murrelet Survey Report, as described in Mitigation Measure D.3a, will be provided to USFWS, CDFG, and San Mateo County Planning Department by December 31 of each year in which a survey takes place.	Schedule for Future Marbled Murrelet Surveys to be provided within 30 days of final Project approval. Future reports of surveys by December 1 of each year in which a survey is conducted.	Verified by San Mateo County Planning Department, USFWS, and CDFG, prior to mine expansion into new areas.
	Mitigation Measure D.3b: *Adaptive Management for Marbled Murrelet*. If marbled murrelet nests are discovered in the Project Area, then the applicant shall confer with USFWS and CDFG as to appropriate measures to take (e.g., establishing a minimum 500-foot buffer around the active nest), in order to avoid adversely affecting this species.	**Mitigation Monitoring and Reporting Measure D.3b** If a marbled murrelet nest is discovered, the applicant shall implement Mitigation Measure D.3b and submit a Marbled Murrelet Nest Protection Plan that includes the results of the conferral with USFWS and CDFG. At the conclusion of the nesting season, the applicant shall submit a Report of Marbled Murrelet Nest Protection.	Upon discovery of a marbled murrelet nest in the Project area.	Verified by San Mateo County Planning Department and USFWS, upon receipt of Plan and Report.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
Impact D.4: Project activities could result in substantial adverse impacts to steelhead. (Less than Significant with mitigation)	**Mitigation Measure D.4a: *Water Storage and Release into Nuff Creek*.** During Phase II of the Project, a water storage system would be created in expansion area A and B. This pond would receive high flows from Nuff Creek during the rainy season, and supplement dry season flows in Nuff Creek or provide pulse flows to assist in smolt migration. The amount of water that would be available for this purpose is about 80 acre-feet, which could provide 0.5 cubic feet per second (cfs) for 80 days, or 0.25 cfs for 160 days (effectively the whole summer and fall). A quarter of a cfs is equivalent to 112 gpm, about twice the late dry-season baseflow in Nuff Creek during a year with wetter-than-normal rainfall. Therefore, if the water storage facilities were available to augment dry season baseflow into Nuff Creek, this could more than off-set the potential loss of baseflow resulting from quarry operations (recall from discussion above, that there could be a loss of several gpm as a result of quarry operations in expansion areas A and B), and could also offset potential impacts to habitat connectivity for steelhead in Pilarcitos Creek. The discharge structure that would feed water back to Nuff Creek during the dry season would be designed to take water from the deeper portions of the storage pond, providing colder water temperatures that are more favorable to steelhead and other aquatic wildlife. The use and standards of this stored water would be decided by agencies such as the Pilarcitos Creek Restoration Workgroup, National Marine Fisheries Service, and/or California Department of Fish and Game. See also the discussion in Impact C.5 in Section IV.C, Hydrology and Water Quality. This pond would function during Phase II and III of the Project, it would be relocated during Phase IV, and then returned to its original location and enlarged during Phase V.	See **Mitigation Monitoring and Reporting Measures C.4 and C.5.**		
	Mitigation Measure D.4b: Implement Mitigation Measures **C.4b, C.4c, C.5a, C.5b,** and **C.5c** in Section IV.C, Hydrology and Water Quality.	See **Mitigation Monitoring and Reporting Measures C.4 and C.5.**		

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
Impact D.5: Project activities could result in substantial adverse impacts to special-status birds. (Less than Significant with mitigation)	**Mitigation Measure D.5a: *Special-Status Bird Protection*.** In accordance with Section 5.8.3.4 of the *Mining and Reclamation Plan* (LSA, 2009), tree removal and trimming will occur outside of the nesting bird season (February 15 through July 31), when feasible. If infeasible, a nesting bird survey shall be conducted prior to the vegetation removal, and tree trimming/removal shall only occur if there are no nesting birds present in the area.	**Mitigation Monitoring and Reporting Measure D.5a:** Mitigation Measures D.5a and D.5b overlap with Area H Conditions of Approval numbers 29 and 30. Implementation of these mitigation measures shall be coordinated with implementation of the Conditions of Approval. Each year, by December 31, the applicant shall submit to the San Mateo County Planning Department an Annual Report of Tree Removal and Trimming that describes activities planned for that calendar year, as well as activities that occurred during the previous year. If any tree removal or trimming activities are planned during the nesting bird season (February 15 through July 31), the applicant shall provide a Work Plan for Nesting Bird Preconstruction Surveys detailing the required preconstruction surveys and protective measures to be taken, as described in Mitigation Measure D.5b.	Annual Report and, if necessary, Work Plan, shall be submitted by December 31 of each year that the Project is in effect.	Verified by San Mateo County Planning Department, upon receipt of Annual Report and Work Plan.
	Mitigation Measure D.5b: *Additional Nesting Bird Surveys and Nest Avoidance*. If Project-related ground-disturbance activities are scheduled to occur during the breeding season (February 15 through July 31), the following measures shall be implemented, to avoid potential adverse effects on nesting raptors and other nesting, special-status birds: • Within two weeks of the start of construction activities, a qualified wildlife biologist shall conduct preconstruction surveys of all potential nesting habitat within 500 feet of ground-disturbing activities, where access is available.	**Mitigation Monitoring and Reporting Measure D.5b:** The applicant shall provide a Report of Nesting Bird Preconstruction Surveys prepared pursuant to Mitigation Measure D.5b within five days of completion of the survey.	Within five days of completion of any preconstruction survey.	Verified by San Mateo County Planning Department, upon receipt of preconstruction survey.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
I**mpact D.5** (cont.)	• If active nests are found during preconstruction surveys, a no-disturbance buffer shall be established around active raptor nests and nests of other special-status birds during the breeding season, or until it is determined that all young have fledged. Typical buffers include 500 feet for raptors and 250 feet for other nesting birds. The size of these buffer zones and types of ground-disturbing activities restricted in these areas may be further modified during coordination with the CDFG, and shall be based on existing noise and human disturbance levels at the Project site. Nests initiated during construction or blasting activities are presumed to be unaffected, and no buffer would be necessary. However, the "take"1 of any individuals will be prohibited. If trees and shrubs within the Project footprint are determined to be unoccupied by special-status birds, or are outside the no-disturbance buffer for active nests, they may be removed.			
Impact D.6: Project activities could result in substantial adverse impacts to the San Francisco dusky-footed woodrat. (Less than Significant with mitigation)	**Mitigation Measure D.6a: *Revegetation Plan*.** Impacts to woodrats in the proposed mining areas will be partially mitigated through the *Mining and Reclamation Plan* (LSA, 2009), which includes a revegetation plan that will benefit dusky-footed woodrats. The revegetation plan uses trees and shrubs that are components of the native vegetation in the Nuff Creek watershed such as California bay, blue blossom, poison oak, California coffeeberry, California blackberry, coyote brush, and thimbleberry. Riparian components include red alder, yellow willow, and arroyo willow. This plant pallet is currently in use for the revegetation plan of the terraces above the quarry operations area south of the expansion area. As this vegetation matures it will provide habitat for woodrats. The protected riparian areas, associated buffers, and undisturbed habitat to the east of the Project site will provide a refuge for the local woodrat population, and a source population for colonization of the revegetated areas.	**Mitigation Monitoring and Reporting Measure D.6a:** Mitigation Measures D.6a, D.6b, and D.6c overlap with Area H Conditions of Approval numbers 31-34. Implementation of these mitigation measures shall be coordinated with implementation of the Conditions of Approval. A Woodrat Protection Master Plan, as described in Area H Condition of Approval 33, will be used to implement and refine Mitigation Measures D.6a, D.6b, and D.6c. This plan is due to be submitted within six months of the beginning of operations within Area H. The Plan shall be updated and re-submitted at the time of each five-year permit renewal.	Within 6 months of the beginning of operations in Area H, and at the time of submittal of application for permit renewal.	Verified by San Mateo County Planning Department and USFWS, upon receipt of Master Plan and at the time of submittal of application for permit renewal.

1 "Take" under the federal Endangered Species Act is defined as harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, collecting, or attempting to engage in any such conduct.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
Impact D.6 (cont.)	**Mitigation Measure D.6b: *Woodrat Avoidance and Temporary Habitat Enhancement*.** The following measures are from LSA's *Mitigation and Monitoring Plan Pilarcitos Quarry (Expansion Area 2)* (2007), and shall apply to all expansion areas in the proposed Project area: 1. Habitat Enhancement. To provide temporary shelter to woodrats forced out of the expansion area by vegetation removal, artificial shelters consisting of old wine half barrels will be placed along the edge of the area to be cleared of vegetation. The wine barrels will be placed with the open end down, and holes (cut in the sides near ground level) will allow woodrats to enter and leave. Wine barrels will be similarly placed within active reclamation areas within the existing quarry, in order to provide cover for woodrats that may seek to establish territories in these areas. *2.* Monitoring of SF Dusky-Footed Woodrats. In an attempt to gain a better understanding of impacts to dusky-footed woodrats, a woodrat trapping and marking program will be conducted in all areas with suitable woodrat habitat in the Project site, that require vegetation removal. Prior to vegetation clearing, a live-trapping program will be conducted for woodrats using Sherman small mammal traps. All trap locations will be numbered located on a map of the expansion area, with the aid of a GPS unit. All woodrats captured will be sexed, measured, weighed, and marked with a numbered ear tag, to allow for later identification and movement of individual woodrats, if recaptured. Trapping will continue during vegetation removal and grading activities, in areas to be cleared of vegetation and with suitable habitat. Trapping will also occur in peripheral areas with suitable habitat, in order to determine if any of the displaced woodrats (i.e., ear tagged individuals) are present and reestablishing territories. Trapping will be conducted for at least two periods in these peripheral areas for one year after vegetation clearing in the expansion area. The results of the trapping survey will be summarized in an annual report.	**Mitigation Monitoring and Reporting Measure D.6b:** The results of the Woodrat Trapping and Marking Study described in Mitigation Measure D.6b(2) will be reported to the San Mateo County Planning Department within one year of the initial clearing of Area H.	Within one year of the initial clearing of Area H.	Verified by San Mateo County Planning Department and USFWS, upon receipt of study.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
I**mpact D.6** (cont.)	**Mitigation Measure D.6c: *Woodrat Nest Buffer*.** A qualified biologist shall conduct preconstruction surveys for woodrats before clearing and grading activities for each expansion area. If active stick houses are observed and can be avoided, wildlife exclusionary fencing (i.e., silt fencing) will be installed around areas active work areas within 50 feet of these active nests.	**Mitigation Monitoring and Reporting Measure D.6c:** Each year, by December 31, the applicant shall submit an Annual Report of Land Clearing and Vegetation Removal Plans and Activities to the San Mateo County Planning Department describing any clearing and vegetation removal activities planned for the next calendar year, and also reporting on any such activities from the previous year. If any clearing or vegetation removal is planned, the applicant shall provide a Work Plan for Woodrat Preconstruction Surveys and Protection Measures, as described in Mitigation Measure D.6c. The applicant shall submit a Report of Woodrat Preconstruction Surveys and Protection Measures within five days of the completion of the survey.	Annual Report and, if necessary, Work Plan, shall be submitted by December 31 of each year that the Project is in effect. Report of preconstruction surveys to be reported within five days of completion of survey.	Verified by San Mateo County Planning Department and USFWS, upon receipt of Annual Report, Work Plan, and Report of Preconstruction Surveys.
Impact D.7: Project activities could result in substantial adverse impacts to special-status bats. (Less than Significant with mitigation)	**Mitigation Measure D.7a: *Bat Roost Avoidance and Surveys*.** As part of the HCP, summarized in Appendix H of the *Mining and Reclamation Plan* (LSA, 2009), the abandoned cabin will be preserved, and surveyed annually in the late spring/early summer to assess its status as a bat roost. Surveys will be conducted through visual emergence surveys at dusk. The results of the bat surveys will be provided in an annual report.	**Mitigation Monitoring and Reporting Measure D.7a:** The Annual Report of Bat Surveys will be submitted to the San Mateo County Planning Department and CDFG by August 1 of each year the Project is in operation.	By August 1 of each year.	Verified by San Mateo County Planning Department and CDFG, upon receipt of annual report.
	Mitigation Measure D.7b: *Additional Measures*. The following measures will reduce impacts to bat roosts to a less than significant level: • Prior to expansion of quarry operations into a new expansion area, a qualified bat biologist shall conduct surveys of all potential roosting habitat within 500 feet of quarry operation activities. Bat surveys may include	**Mitigation Monitoring and Reporting Measure D.7b:** The Annual Report of Land Clearing and Vegetation Removal Plans and Activities (Mitigation Monitoring and Reporting Measure D.6c) will include a determination of the potential for planned	Work Plan for Preconstruction Bat Surveys shall be submitted by December 31 of each year that the Project is in effect, if necessary. Report of Preconstruction Bat	Verified by San Mateo County Planning Department and CDFG, upon receipt of reports and work plan.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
Impact D.7 (cont.)	emergence surveys, mist netting, or acoustic surveys, or ideally, a combination of the three methods. • If active maternity roosts are identified, impacts shall be minimized by either: (1) establishing a no-disturbance buffer around the roost, the size of which shall be determined by CDFG; or (2) restricting quarry operations in that area to periods least likely to impact the bats (e.g., no work will occur April 15 – August 15 if there are maternity roosts), as determined by a qualified bat biologist (i.e., a biologist holding a Memorandum of Understanding for working with bats from CDFG). • If a known bat roost would be impacted or destroyed during the non-maternity season, artificial bat roosts shall be constructed in an undisturbed area of the property, at least 200 feet from any Project activities. The design and location of the bat roost(s) shall be determined by a qualified bat biologist.	activities to disturb bat roosts. If such a potential exists, the applicant shall provide a Work Plan for Preconstruction Bat Surveys and Protection Measures, as described in Mitigation Measure D.7b. The applicant shall submit a Report of Preconstruction Bat Surveys and Protection Measures within five days of the completion of the survey.	Surveys to be submitted within five days of completion of survey.	
Impact D.8: The proposed Project would impact riparian habitat and other sensitive natural communities. (Less than Significant with mitigation)	**Mitigation Measure D.8a: *Measures to Minimize and Avoid Impacts to Riparian Habitat*.** Proposed mining operations would avoid jurisdictional wetlands and their 30- to 100-foot buffers (ESHAs), as described in Impact D.11, except for the ESHA between proposed expansion areas A and B, which would be removed completely.	**Mitigation Monitoring and Reporting Measure D8a:** San Mateo County Planning Department's periodic inspection of the quarry operation shall include inspection of jurisdictional wetlands and buffers to ensure that mining and reclamation activities are not encroaching on them.	Periodically (at least once per year).	Verified by San Mateo County Planning Department within 30 days following periodic inspection.
	Mitigation Measure D.8b: *Measures to Restore Riparian Habitat*. As part of the proposed Project, a culverted portion of Nuff Creek and its riparian habitat would be restored during Phase I and Phase V of the Project. Restoration activities would occur during the summer, when Nuff Creek's flow is minimal and there is limited or no drainage from the ravines on the sides of the canyon. In Phase I, the southernmost 350 feet of the culverted creek would be day-lighted by grading an open stream channel approximately 30 feet wide, and creating a 30-foot wide floodplain and buffer zone on either side of the creek bed. A coastal riparian woodland would be planted in and along the creek. In Phase V, the Nuff Creek	**Mitigation Monitoring and Reporting Measure D8b:** Following final Project approval, and before the start of mining or reclamation activities under the Project, the applicant shall prepare and submit to the San Mateo County Planning Department and CDFG detailed Construction Plans for the Phase I Restoration of Nuff Creek, and Conceptual Plans for the Phase V Restoration of Nuff	Plans to be submitted following final Project approval and before commencement of mining or reclamation activities under the Project. Report of completion to be submitted within 30 days of completion of restoration work.	Verified by San Mateo County Planning Department and CDFG, upon receipt plans and report of completion.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
I**mpact D.8** (cont.)	culvert would be completely removed (including the primary tributary culverted west of the process plant) and restored, and the area of the current processing plant would be restored to wetland and upland habitat that is connected to the Nuff Creek floodplain. The riparian planting zones, planting density, and planting specifications for trees, shrubs, willow poles, and wetland plugs are detailed in Section 5.7 of the *Mining and Reclamation Plan* (LSA, 2009). This revegetated portion of Nuff Creek would be monitored for 5 years, and would meet the performance criteria outlined in Section 5.9 of the *Mining and Reclamation Plan* (LSA, 2009).	Creek. These plans will become a part of a conforming Mining and Reclamation Plan, which will be reviewed and approved by San Mateo County prior to Project implementation. Phase I restoration of Nuff Creek shall occur within one year of final Project approval. The applicant shall provide San Mateo County Planning Department with a Report of Completion of Phase I Restoration of Nuff Creek, detailing the restoration work completed, within 30 days of completion.		
	Mitigation Measure D.8c: *Conservation of Existing Riparian*. Impacts to riparian habitat at this Project site will be partially mitigated through the creation of a 210-acre conservation easement covering the northern portion of the quarry property, which contains red alder riparian, red alder forest, central coast arroyo willow thickets, and Douglas-fir riparian habitat. This easement would be adjacent to other conservation lands managed by the San Francisco Public Utilities Commission (SFPUC), and would encompass the upper Nuff Creek watershed (including perennial and intermittent streams, riparian habitat, and wetlands).	See **Mitigation Monitoring and Reporting Measure D2d**.		
Impact D.9: The proposed Project would impact federally protected wetlands as defined by Section 404 of the Clean Water Act. (Less than Significant with mitigation)	**Mitigation Measure D.9a: *Additional Wetland Creation and/or Restoration*.** If the creation of ponds and the restoration of a portion of Nuff Creek onsite (described above) do not fully mitigate for the loss of wetlands and riparian from the Project, as determined by the regulatory agencies, then additional wetlands/riparian shall be created/restored. Regulatory agencies generally require restoration or creation of wetlands at a 1:1 impact-to-creation or restoration ratio onsite, and 3:1 impact-to-creation or restoration ratio offsite.	**Mitigation Monitoring and Reporting Measure D9:** Following final Project approval, and before the start of mining or reclamation activities under the Project, the applicant shall prepare and submit to the San Mateo County Planning Department and CDFG a Wetland Mitigation and Monitoring Program, as described in Mitigation Measure D.9b. This Program will become a part of a conforming Mining and Reclamation Plan, to be reviewed	Wetland Mitigation and Monitoring Program to be submitted following final Project approval and before commencement of mining or reclamation activities under the Project. Annual report to be submitted by December 31 of each year. Wetland Mitigation and Monitoring Program	Verified by San Mateo County Planning Department and CDFG, upon Annual Reports, and at the time of submittal of application for permit renewal.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
I**mpact D.9** (cont.)	**Mitigation Measure D.9b: *Wetland Mitigation and Monitoring Program*.** As part of their mitigation for temporary and permanent impacts to jurisdictional waters of the U.S., the Project applicant shall develop a Wetland Mitigation and Monitoring Program. This Wetland and Mitigation Program shall be submitted to the regulatory agencies prior to the start of construction, or in coordination with regulatory permit conditions. It shall outline the mitigation obligations for temporary and permanent impacts to waters of the U.S., including wetlands, resulting from implementation of quarry activities under the Pilarcitos Quarry Expansion Plan (e.g., restoration of existing wetlands, creeks, and riparian habitat, or creation of new features). The Wetland Mitigation and Monitoring Plan shall include baseline information from existing conditions, anticipated habitat enhancement, site-specific plans to compensate for wetland losses resulting from the Project performance and success criteria, and monitoring and reporting requirements.	and approved by San Mateo County prior to the commencement of mining or reclamation activities under the Project. The Program shall be updated and re-submitted at the time of each five-year permit renewal. In addition, the applicant shall submit, by December 31 of each year, a Report of Wetland Mitigation and Monitoring Program, that details any wetland mitigation planned or completed, and the results of the previous year's wetland monitoring.	updates to be included with submittal of application for permit renewal each five years.	
Impact D.10: Expansion of quarry operations could result in the spread of non-native, invasive plant species affecting natural plant community health. (Less than Significant with mitigation)	**Mitigation Measure D.10: *Invasive Species Removal, Revegetation, and Revegetation Monitoring*.** Weed management would be implemented during mining and reclamation using methods such as herbicide application, hand removal, and mechanical removal, at the appropriate time of year for the target species, as outlined in Section 5.8 of the *Mining and Reclamation Plan* (LSA, 2009). Then during reclamation, the quarry floor, slopes, and benches would be revegetated to restore pre-existing natural communities such as riparian woodland along the restored channel of Nuff Creek, patches of Douglas-fir forest, coastal scrub, grassland, freshwater marsh/wetlands, and ponds. Revegetation would follow the planting specifications (e.g., species, planting methods, sapling size, and plant densities) described in Section 5.7 of the *Mining and Reclamation Plan* (LSA, 2009). These replanted areas would be monitored for 5 years, and deemed successful only when they meet the replanting criteria described in Section 5.9 of the *Mining and Reclamation Plan* (LSA, 2009). Replanting disturbed areas with native species, and monitoring the success of these replanted areas, would reduce or block the reintroduction of invasive plants.	**Mitigation Monitoring and Reporting Measure D10:** Following final Project approval, and before the start of mining or reclamation activities under the Project, the applicant shall prepare and submit to the San Mateo County Planning Department and CDFG an Invasive Species Monitoring and Removal Program. This program will become a part of a conforming Mining and Reclamation Plan, to be reviewed and approved by San Mateo County prior to the commencement of mining or reclamation activities under the Project. The Program shall be updated and re-submitted at the time of each five-year permit renewal. In addition, the applicant shall submit, by December 31 of each year, a Annual Report of Invasive Species Monitoring and	Invasive Species Monitoring and Removal Program to be submitted following final Project approval and before commencement of mining or reclamation activities under the Project. Annual report to be submitted by December 31 of each year. Invasive Species Monitoring and Removal Program updates to be submitted at time of application for five-year permit renewal.	Verified by San Mateo County Planning Department and CDFG, upon receipt of Program, annual reports, and program updates.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
I**mpact D.10** (cont.)		Removal Program, that details monitoring results and efforts to control invasive species planned or completed.		
Impact D.11: Implementation of the proposed Project could conflict with local policies or ordinances protecting biological resources, such as the heritage tree ordinance of San Mateo County. (Less than Significant with mitigation)	**Mitigation Measure D.11a: *Protection of Retained Trees*.** As stipulated in Section 5.8.3.3 of the *Mining and Reclamation Plan* (LSA, 2009), all native trees to be preserved in areas where non-native trees are being removed would be visibly marked or tagged. Protective fencing would be installed around the preserved trees for the duration of tree removal or other construction activity. It would not be assumed that contractors would be able to identify native species.	**Mitigation Monitoring and Reporting Measure D11:** Following final Project approval, and before the start of mining or reclamation activities under the Project, the applicant shall prepare and submit to the San Mateo County Planning Department and CDFG a Native Tree Protection and Preservation Program. This program will become a part of a conforming Mining and Reclamation Plan, to be reviewed and approved by San Mateo County prior to the commencement of mining or reclamation activities under the Project. The Program shall include the map described in Mitigation Measure D11c, and shall include an overall strategy for protection and preservation of native trees over the course of the Project. The Program shall be updated and re-submitted at the time of each five-year permit renewal. In addition, the applicant shall submit, by December 31 of each year, an Annual Report of the Native Tree Protection and Preservation Program, including a description of planned and completed actions to protect and preserve native trees.	Native Tree Protection and Preservation Program to be submitted following final Project approval and before commencement of mining or reclamation activities under the Project. Annual report to be submitted by December 31 of each year. Program updates to be submitted at time of application for five-year permit renewal.	Verified by San Mateo County Planning Department and CDFG, upon receipt of Program, annual reports, and program updates.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
I**mpact D.10** (cont.)	**Mitigation Measure D.11b: T*ree Planting*.** Revegetation activities are outlined in Section 5.7 of the *Mining and Reclamation Plan* (LSA, 2009), and include planting with native tree species such as coast live oak, madrone, and Douglas-fir. **Mitigation Measure D.11c: *Map Protected Trees in Work Areas*.** As required by the San Mateo County Heritage Tree Ordinance, the applicant shall prepare a map indicating the size and species of trees to be removed and retained for each reclamation phase and for post-reclamation development planning, and all removed heritage trees shall be replaced at a 1:1 ratio using tree species and tree sizes specified in the tree removal permit. In addition, the applicant shall adhere to the following: • Where proposed development or other site work must encroach upon the dripline of a preserved tree, special construction techniques shall be implemented to allow the tree roots within the Project site to breathe and obtain water (examples include, but are not limited to, use of hand equipment for tunnels and trenching, and/or allowance of only one pass through a tree's dripline). • No parking of equipment, stockpiling of excavated soils or construction materials, or dumping of oils or chemicals shall occur within the dripline of retained trees.			
Transportation and Traffic				
Impact E.3: The Project would contribute to potential traffic safety hazards for bicyclists and pedestrians on public roadways. (Less than Significant with mitigation)	**Mitigation Measure E.3a:** The Project applicant shall ensure that all loaded trucks are covered or maintain a six-inch free board to prevent spillage of materials onto haul routes.	**Mitigation Monitoring and Reporting Measure E.3:** San Mateo County Planning Department staff will inspect trucks leaving the Project site and the roadway at the intersection of SR 92 and the quarry access road for compliance with Mitigation Measures E.3a and E.3b during their periodic inspection of the operation.	Annually, during periodic inspection	Verified by San Mateo County Planning Department and Office of Mine Reclamation.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Transportation and Traffic (cont.)				
Impact E.3 (cont.)	**Mitigation Measure E.3b:** The Project applicant shall ensure that the intersection of the access road and SR 92 be kept free of loose gravel and dirt that may accumulate from exiting trucks.			
Impact E.4: The Project would contribute to the potential for traffic collisions on public roadways. (Significant and Unavoidable)	**Mitigation Measure E.4a:** The County shall request Caltrans to post warning signs on SR 92 about 250 feet before the access driveway that caution drivers to truck traffic entering and exiting the roadway. The warning signs shall follow guidelines set forth in the *California Manual on Uniform Traffic Control Devices*.	**Mitigation Monitoring and Reporting Measure E.4a:** The San Mateo County Planning Department will send a formal request to Caltrans requesting posting of warning signs.	Within 90 days of final Project approval.	Verified by San Mateo County Planning Department upon sending formal request.
	Mitigation Measure E.4b: The Project applicant shall work with Caltrans to ensure that acceleration and deceleration lanes are installed along the Project access frontage.	**Mitigation Monitoring and Reporting Measure E.4b:** Within 90 days of final Project approval, the applicant shall provide San Mateo County with evidence that they have initiated discussions with Caltrans regarding installation of acceleration and deceleration lanes. The applicant shall copy the San Mateo County Planning Department on all correspondence with Caltrans regarding this matter.	Within 90 days of final Project approval.	Verified by San Mateo County Planning Department upon notification by the applicant.
Impact E.6: The proposed Project would contribute to traffic volumes at area intersections and roadways beyond the analysis horizon year 2028. (Less than Significant with mitigation)	**Mitigation Measure E.6:** The County shall review requests for permit renewal in years beyond the cumulative analysis, and shall require Project-level analyses of potential Project-specific traffic impacts, as well as implementation of mitigation measures that could be needed to reduce impacts to a less than significant level.	**Mitigation Monitoring and Reporting Measure E.6:** Prior to 2028, the applicant shall prepare a Report of Quarry Traffic Analysis, which may be submitted with an application for a five-year permit renewal.	Prior to 2028.	Verified by San Mateo County Planning Department upon receipt of application for permit renewal, prior to 2028.
Air Quality and Greenhouse Gases				
Impact F.1: The proposed Project would increase annual production levels, resulting in additional annual operation of excavation and processing equipment, and an increase in annual haul truck trips, which would increase annual air emissions. (Less than Significant with mitigation)	**Mitigation Measure F.1a:** ***Replace Off-Road Diesel Equipment.*** The applicant shall replace existing off-road diesel fueled equipment on site with newer Tier 4 equipment under the schedule established by the California Air Resources Board.	**Mitigation Monitoring and Reporting Measure F.1a:** Within 60 days of final Project approval, the applicant shall provide the San Mateo County Planning Department with a Schedule for Diesel-Powered Equipment Upgrades that details engine	Within 60 days of final Project approval, and ongoing over the course of upgrade schedule	Verified by San Mateo County Planning Department, upon receipt of schedule and upgrade reports.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Air Quality and Greenhouse Gases				
Impact F.1 (cont.)		upgrade or replacement with Tier 4 equipment. The applicant shall provide the County with a Notification of Diesel-Powered Equipment Upgrades within 30 days of all upgrades.		
	Mitigation Measure F.1b: Install PM_{10} abatement equipment on processing equipment, as needed (including spray misters, and baghouses, and/or sheds) to reduce Project PM_{10} emissions.	**Mitigation Monitoring and Reporting Measure F.1b:** Within 30 days of final Project approval, the applicant shall provide the San Mateo County Planning Department with a Schedule for PM_{10} Abatement Equipment Installation. The applicant shall provide the County with a Notification of PM_{10} Abatement Equipment Installation within 30 days of all installations.	Within 30 days of final Project approval, and ongoing over the course of the installation schedule.	Verified by San Mateo County Planning Department., upon receipt of schedule and installation reports.
Impact F.6: The proposed Project would increase greenhouse gas (GHG) emissions, and contribute to global climate change. (Less than Significant with mitigation)	**Mitigation Measure F.6a:** The applicant shall become a reporting member of The Climate Registry. Beginning with the first year of quarry operations under the Project, and continuing through the completion of quarry reclamation, the applicant shall conduct an annual inventory of greenhouse gas emissions, and report these to The Climate Registry. The annual inventory shall be conducted according to The Climate Registry protocols and third-party verified by a verification body accredited through The Climate Registry. Copies of the annual inventory shall be submitted to the San Mateo County Planning Department.	**Mitigation Monitoring and Reporting Measure F.6:** By June 30 of each calendar year following final Project approval, the applicant shall submit to the San Mateo County Planning Department the Annual Inventory of Greenhouse Gas Emissions along with third-party verification and evidence of receipt by The Climate Registry. The report will include details of GHG reduction efforts and offsets.	By June 30 of each year.	Verified by San Mateo County Planning Department, upon receipt of annual report.
	Mitigation Measure F.6b: The applicant shall take the following steps to ensure that GHG emissions do not exceed 1,100 MT CO_2e per year: • The applicant shall fuel off-road vehicles with alternative fuels (such as biodiesel and compressed natural gas) to achieve a reduction in the carbon intensity of fuel use of a minimum of 10 percent. Because trucks hauling materials from the quarry are not owned by the quarry, this measure shall apply only to off-road vehicles.			

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Air Quality and Greenhouse Gases				
Impact F.6 (cont.)	• To further reduce emissions to below 1,100 MT CO_2e per year, the applicant shall offset all remaining Project emissions above that threshold. Offset of Project emissions shall be demonstrated to be real, permanent, verifiable, enforceable, and additional, as determined by San Mateo County in its sole discretion. To the maximum extent feasible, as determined by San Mateo County, offsets shall be implemented locally. Offsets may include but are not limited to, the following (in order of preference): i. Onsite offset of Project emissions. This may include enhanced carbon sequestration in the proposed conservation easement area and constructed wetlands. It may also include a renewable energy generation Project, such as solar or wind energy. If the applicant develops an offset Project, it must be registered with the Climate Action Reserve or otherwise approved by San Mateo County in order to be used to offset Project emissions. The number of offset credits produced would then be included in the annual inventory, and the net (emissions minus offsets) calculated. ii. Funding of local Projects, subject to review and approval by San Mateo County, that will result in real, permanent, verifiable, enforceable, and additional reduction in GHG emissions. If the BAAQMD or San Mateo County develops a GHG mitigation fund, the applicant may instead pay into this fund to offset GHG emissions in excess of the significance threshold. iii. Purchase of carbon credits to offset emissions to below the significance threshold. Only carbon offset credits that are verified and registered with the Climate Action Reserve, or available through a County-approved local GHG mitigation bank or fund, may be used to offset Project emissions.			

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Noise and Vibration				
Impact G.4: The proposed Project would result in mining operations, including blasting, at additional locations in Nuff Creek Canyon higher (further west) in the Canyon than where they currently occur. Vibration and air-overpressure effects from blasting events could impact the integrity of landfill cells at the adjacent Ox Mountain landfill and may be noticeable at the nearest sensitive receptors. (Less than Significant with mitigation)	**Mitigation Measure G.4.a:** All blast-holes shall have a drilled diameter of less than 4.5 inches. **Mitigation Measure G.4.b:** All blasting events shall have a charge-weight-per-delay limit not to exceed 200 pounds. **Mitigation Measure G.4.c:** Ground vibration shall be measured for all blasting events. Measurements shall be taken at the nearest offsite structure or at the closest point of the waste cells at the Ox Mountain Landfill site when blasts are located within 500 feet of the site. All monitoring shall conform to the most current standards set forth by the Vibration Section of the Society of Explosives Engineers. **Mitigation Measure G.4.d:** All blasting events shall have all charges stemmed with at least 8 feet of clean crushed stone to control rock movement and resultant air-overpressure. **Mitigation Measure G.4.e:** All blasting events shall have all charges placed with a minimum confining burden of at least 20 charge diameters to control rock movement and resultant air-overpressure. **Mitigation Measure G.4.f:** Air-overpressure shall be measured for all blasting events. Measurements shall be taken at the nearest offsite structure or at the closest point of the waste cells at the Ox Mountain Landfill site when blasts are located within 500 feet of the site. All monitoring shall conform to the most current standards set forth by the Vibration Section of the Society of Explosives Engineers.	**Mitigation Monitoring and Reporting Measure G.4:** Within 60 days of final Project approval, and prior to commencement of any mining activities under the Project, the applicant shall submit to the San Mateo County Planning Department a Blasting Program that details how they will comply with Mitigation Measures G.4a through G.4f. This program will become a part of a conforming Mining and Reclamation Plan, to be submitted to San Mateo County prior to Project implementation. In addition, by December 31 of each year that the Project is in operation, the applicant shall submit an Annual Blasting Report to San Mateo County summarizing the previous year's blasting activities and demonstrating compliance with blasting standards and procedures for each blast that occurred during that year.	Within 60 days of final Project approval, and by December 31 of each year thereafter.	Verified by San Mateo County Planning Department, upon receipt of blasting program and annual blasting reports.
Hazards and Hazardous Materials				
Impact H.3: The proposed Project would result in blasting activities within 300 feet of landfill cells at the Ox Mountain Landfill. Blasts occurring in an environment where methane concentrations are in the combustible range could result in an uncontrolled detonation. (Less than Significant with mitigation)	**Mitigation Measure H.3:** Blast holes located within 500 feet of Ox Mountain Landfill cells shall be monitored for the presence of methane gas. Blasting shall be allowed to proceed if methane concentrations are less than the 0.1 percent trace level allowed by the Bay Area Air Quality Management District for landfill gas collection operations**.**	See Mitigation Monitoring and Reporting Measure G.4.	See Mitigation Monitoring and Reporting Measure G.4.	See Mitigation Monitoring and Reporting Measure G.4.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Hazards and Hazardous Materials (cont.)				
Impact H.4: The proposed Project would result in the use of blasting agents. Fugitive blasting agents accidentally released to the environment would have the potential to contaminate soil and/or groundwater. (Less than Significant with mitigation)	**Mitigation Measure H.4:** Explosive spills will be cleaned up immediately to prevent losses of nitrates and ammonia to the ground and neighboring water resources.	See Mitigation Monitoring and Reporting Measure G.4.		
Cultural Resources				
Impact K.2: The Project could adversely affect currently unknown historical resources, including unique archaeological resources. (Less than Significant with mitigation)	**Mitigation Measure K.2:** If any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing activities, all work within 50 feet of the resources will be halted and the Project proponent will consult with a qualified archaeologist to assess the significance of the find according to CEQA Guidelines Section 15064.5. If any find is determined to be significant, the Project proponent and the archaeologist will meet to determine the appropriate avoidance measures or other appropriate mitigation, the Project proponent (as applicable) will make the final determination. All significant cultural materials recovered will be, as necessary and at the discretion of the consulting archaeologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards. In considering any suggested mitigation proposed by the consulting archaeologist in order to mitigate impacts to historical resources or unique archaeological resources, the Project proponent will determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, Project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g., data recovery) will be instituted. Work may proceed on other parts of the Project site while mitigation for historical resources or unique archaeological resources is being carried out.	**Mitigation Monitoring and Reporting Measure K.2:** Within 60 days of final Project approval, and prior to commencement of any mining activities under the Project, the applicant shall submit to the San Mateo County Planning Department a Cultural Resources Accidental Discovery and Preservation Program that includes a plan and protocols for implementation of Mitigation Measures K.2 and K.4. This will include a plan to train employees to recognize cultural resources and human skeletal remains. This Program will become a part of a conforming Mining and Reclamation Plan, to be submitted to San Mateo County prior to Project implementation. In addition, if cultural resources or human skeletal remains are encountered during mining or reclamation activities, the applicant shall inform the San Mateo County Planning Department immediately.	Within 60 days of final Project approval, and in the event that cultural resources are discovered.	Verified by San Mateo County Planning Department, upon receipt of Cultural Resources Program and any notification of accidental discovery.

TABLE VI-1 (Continued)
PILARCITOS QUARRY EXPANSION MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact (Significance Level after Mitigation)	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Cultural Resources (cont.)				
Impact K.4: Project construction could result in damage to previously unidentified human remains. (Less than Significant with mitigation)	**Mitigation Measure K.4:** If human skeletal remains are uncovered during Project construction, the Project proponent (depending upon the Project component) will immediately halt work, contact the San Mateo County coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines. If the County coroner determines that the remains are Native American, the Project proponent will contact the NAHC, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by AB 2641). Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section (PRC 5097.98), with the most likely descendents regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.			

TABLE VI-2
MITIGATION REPORTING SCHEDULE

Report Title	Mitigation Monitoring and Reporting Measure Reference	Initial Due Date	Frequency	Annual Report Date
Report of Slope Stability Evaluations	B.1b	Prior to commencement of mining Phase I	Prior to commencement of each mining phase	n.a.
Slope Stability Adaptive Management Plan	B.1c	Within 60 days of final Project approval	Updated every 5 years at time of mining permit renewal	n.a.
Report of Slope Inspection	B.1d	30 days following first quarterly inspection	30 days after the close of each calendar quarter	n.a.
Phase II and III Mining Plan Revisions	B.2	Within 180 days of final Project approval	n.a.	n.a.
Seepage Analysis	B.3	Prior to commencement of mining Phase III	n.a.	n.a.
Bench Removal Analysis	B.4	Prior to commencement of each reclamation phase	n.a.	n.a.
Earthen Water Impoundments Geotechnical Standards Report	B.5	Within 180 days of final Project approval	n.a.	n.a.
Design Specifications for Bedrock Freeboard, Dam Stability, and Spillway Capacity	B.6	Within 180 days of final Project approval	Prior to each mining phase	n.a.
Inspection of Sediment and Runoff Control Facilities Report	B.7a	Within 6 months of final Project approval	At least annually	n.a.
Revegetation Standards Report	B.7c	Within 60 days of final Project approval	Updated every 5 years at time of mining permit renewal	n.a.
Report of Culvert Inspection	B.7d	Within 90 days of final Project approval	Each five years.	n.a.
Erosion Control Facilities Inspection Report	B.7e	Within 90 days of final Project approval	Annually	December 31
Periodic Inspection Report	C.1a, C.1b	Within 6 months of final Project approval	At least annually	n.a.
Report of Channel Geomorphology Monitoring	C.1c	Following channel restoration	Annually	December 31
Annual Report of Stormwater Sampling and Analysis	C.1d	By December 31 of the first year of Project implementation	Annually	December 31
Stream Channel Stabilization Plan	C.1e	Within 30 days of submittal of Annual Report of Channel Geomorphology Monitoring	n.a.	n.a.
Drainage Feature Plans	C.2	Within 90 days of final Project approval	Prior to each mining phase	n.a.
Report of Water Storage Facilities Management System	C.4a	Within 1 year of final Project approval	n.a.	n.a.

TABLE VI-2 (Continued)
MITIGATION REPORTING SCHEDULE

Report Title	Mitigation Monitoring and Reporting Measure Reference	Initial Due Date	Frequency	Annual Report Date
Report of Stream Monitoring Stations and Monitoring Wells Installation	C.4b	Within four months of final Project approval	n.a.	n.a.
Annual Report of Stream and Groundwater Monitoring	C.4b	By December 31 of the first year of Project implementation	Annually	December 31
Periodic Hydraulic Report	C.4c	Prior to first mining phase or at first 5-year permit renewal, whichever comes first	Prior to each mining phase and at each 5-year permit renewal.	n.a.
Application for Appropriative Water Rights	C.5a	Within 2 years of final Project approval	n.a.	n.a.
Water System Operation and Management Plan	C.5a	Within 2 years of final Project approval	n.a.	n.a.
Water System Operation Monitoring and Reporting Program	C.5a	Within 2 years of final Project approval	n.a.	n.a.
Water System Annual Monitoring Report	C.5c	By December 31 of the first year of Project implementation	Annually	December 31
Water System Operation Five-Year Monitoring Report	C.5c	At time of first 5-year permit renewal	At each 5-year permit renewal	n.a.
Water System Operation Next Mining Phase Monitoring Report	C.5c	One year prior to anticipated beginning of each new mining phase.	Prior to each mining phase.	n.a.
Areas A and B Hydrogeologic Report	C.6a, C.6b	Prior to mining in Areas A or B	Prior to each successive mining phase.	n.a.
Report of Areas A and B Groundwater Monitoring Wells Installation	C.6c	Prior to mining in Areas A or B	n.a.	n.a.
Semi-Annual Report of Areas A and B Groundwater Monitoring	C.6c	6 months following monitoring well installation	Every 6 months	June 30, December 31
Baseline Areas A and B Hydrogeologic Monitoring Report	C.6c	2 years after monitoring well installation	n.a.	n.a.
Baseline Areas A and B Seepage Monitoring Supplement	C.6c	2 years after monitoring well installation	n.a.	n.a.
Annual Areas A and B Hydrogeologic Monitoring Report	C.6c	1 year after submittal of Baseline report	Annually	December 31
Annual Areas A and B Seepage Monitoring Supplement	C.6c	1 year after submittal of Baseline report	Annually	December 31
Areas A and B Seepage Control Plan	C.6c	As needed	n.a.	n.a.

TABLE VI-2 (Continued)
MITIGATION REPORTING SCHEDULE

Report Title	Mitigation Monitoring and Reporting Measure Reference	Initial Due Date	Frequency	Annual Report Date
Areas A and B Contaminated Groundwater Remediation Plan.	C.6d	As needed	n.a.	n.a.
Annual Report of Wash Water Use and Disposal	C.7a	December 31 of year of final Project approval	Annually	December 31
Annual Report of Quarterly Groundwater Monitoring	C.7b	December 31 of year of final Project approval	Annually	December 31
Special-Status Plant Species Pre-construction Survey Work Plan	D.1	Prior to each planned vegetation clearing	As needed	n.a.
Special-Status Plant Species Monitoring Report	D.1	Within 14 days of completion of each clearing event	As needed	n.a.
California Red-legged Frog Pre-construction Survey and Construction Monitoring Work Plan	D.2a.1	Prior to planned ground disturbance in expansion areas	n.a.	n.a.
Report of California Red-legged Frog Protection Measures	D.2a.1	Following ground disturbance in expansion areas	n.a.	n.a.
Pond Operations Plan	D.2a.2	Within 60 days of final Project approval	At each 5-year permit renewal	n.a.
Report of Pond Operations Plan Implementation	D.2a.2	December 31 of year of final Project approval	Annually	December 31
Plan for CRLF Exclusion Fencing	D.2b	Prior to commencement of ground disturbance in Area H	Prior to additional land-clearing	n.a.
Report of CRLF Fence Installation	D.2b	Upon completion of fence installation	Prior to additional land-clearing	n.a.
CRLF Habitat Enhancement Plan	D.2c.1	Within one year of commencement of mining activities in Area H	n.a.	n.a.
Notice of CRLF Enhancement Plan Implementation	D.2c.1	Upon completion of enhancement projects	n.a.	n.a.
Annual Report of CRLF Surveys	D.2c.2	December 31 of year of final Project approval	Annually	December 31
Report of Conservation Easement Expansion	D.2d	Upon addition of lands to the existing conservation easement	n.a.	n.a.
Exclusion Fencing Plans	D.2e	Prior to new disturbance in expansion areas	n.a.	n.a.
Report of CRLF Fence Installation	D.2e	Prior to new disturbance in expansion areas	n.a.	n.a.
Schedule for Future Marbled Murrelet Surveys	D.3a	Within 30 days of final Project approval	n.a.	n.a.
Marbled Murrelet Survey Report	D.3a	By December 31 of each year that a survey takes place	n.a.	n.a.
Marbled Murrelet Nest Protection Plan	D.3b	Upon discovery of a nest	n.a.	n.a.

TABLE VI-2 (Continued)
MITIGATION REPORTING SCHEDULE

Report Title	Mitigation Monitoring and Reporting Measure Reference	Initial Due Date	Frequency	Annual Report Date
Report of Marbled Murrelet Nest Protection	D.3b	Upon conclusion of nesting season	n.a.	n.a.
Annual Report of Tree Removal and Trimming	D.5a	December 31 of year of final Project approval	Annually	December 31
Work Plan for Nesting Bird Preconstruction Surveys	D.5a	With Annual Report of Tree Removal and Trimming, if necessary	Annually, if necessary	December 31
Report of Nesting Bird Preconstruction Surveys	D.5b	Within 5 days of completion of surveys	n.a.	n.a.
Woodrat Protection Master Plan	D.6a	Within 6 months of commencement of Area H mining activities	At each 5-year permit renewal	n.a.
Woodrat Trapping and Marking Study	D.6b	Within one year of the initial clearing of Area H	n.a.	n.a.
Annual Report of Land Clearing and Vegetation Removal Plans and Activities	D.6c	December 31 of year of final Project approval	Annually	December 31
Work Plan for Woodrat Preconstruction Surveys and Protection Measures	D.6c	December 31 of year of final Project approval, if needed	Annually, if necessary	December 31
Report of Woodrat Preconstruction Surveys and Protection Measures	D.6c	Within 5 days of completion of surveys	n.a.	n.a.
Annual Report of Bat Surveys	D.7a	By August 1 of the year of final Project approval	Annually	August 1
Work Plan for Preconstruction Bat Surveys and Protection Measures	D.7b	December 31 of year of final Project approval, if needed	Annually, if necessary	December 31
Report of Preconstruction Bat Surveys and Protection Measures	D.7b	Within 5 days of completion of surveys	n.a.	n.a.
Construction Plans for the Phase I Restoration of Nuff Creek	D.8b	Within 60 days of final Project approval	n.a.	n.a.
Conceptual Plans for the Phase V Restoration of Nuff Creek	D.8b	Within 60 days of final Project approval	n.a.	n.a.
Report of Completion of Phase I Restoration of Nuff Creek	D.8b	Within 30 days of restoration project completion	n.a.	n.a.
Wetland Mitigation and Monitoring Program	D.9	Within 60 days of final Project approval	At each 5-year permit renewal	n.a.
Report of Wetland Mitigation and Monitoring Program	D.9	December 31 of year of final Project approval	Annually	December 31
Invasive Species Monitoring and Removal Program	D.10	Within 60 days of final Project approval	At each 5-year permit renewal	n.a.

TABLE VI-2 (Continued)
MITIGATION REPORTING SCHEDULE

Report Title	Mitigation Monitoring and Reporting Measure Reference	Initial Due Date	Frequency	Annual Report Date
Annual Report of Invasive Species Monitoring and Removal Program	D.10	December 31 of year of final Project approval	Annually	December 31
Native Tree Protection and Preservation Program	D.11	Within 60 days of final Project approval	At each 5-year permit renewal	n.a.
Annual Report of the Native Tree Protection and Preservation Program	D.11	December 31 of year of final Project approval	Annually	December 31
Truck-related safety hazards inspection	E.3	Within six months of final Project approval	At lease annually	n.a.
Evidence of discussions with Caltrans	E.4b	Within 90 days of final Project approval	n.a	n.a.
Report of Quarry Traffic Analysis	E.6	Prior to 2028	n.a.	n.a.
Schedule for Diesel-Powered Equipment Upgrades	F.1a	Within 60 days of final Project approval	n.a.	n.a.
Notification of Diesel-Powered Equipment Upgrades	F.1a	Within 30 days of equipment upgrades	n.a.	n.a.
Schedule for PM_{10} Abatement Equipment Installation	F.1b	Within 60 days of final Project approval	n.a.	n.a.
Notification of PM_{10} Abatement Equipment Installation	F.1b	Within 30 days of equipment installation	n.a.	n.a.
Annual Inventory of Greenhouse Gas Emissions	F.6	By June 30 of the first year following final Project approval	Annually	June 30
Blasting Program	G.4	Within 60 days of final Project approval	n.a.	n.a.
Annual Blasting Report	G.4	December 31 of year of final Project approval	Annually	December 31
Cultural Resources Accidental Discovery and Preservation Program	K.2	Within 60 days of final Project approval	n.a.	n.a.