2. Project Description

2.1 Project Summary

Hanson Aggregates Mid-Pacific (Applicant) is applying for a modification to an existing Conditional Use Permit (CUP) and seeking approval for a Reclamation Plan Amendment (RPA) to expand the existing operations of the Santa Margarita Quarry, located approximately three miles northeast of the community of Santa Margarita. The quarry is a hard-rock aggregate mining facility located in an unincorporated area of San Luis Obispo County, and is identified as California State Mine Number 91-40-0003. Figure 2.1-1 provides a regional map of the quarry's location.

The Applicant proposes to expand the existing boundaries of the quarry by an estimated 33 acres, thereby enlarging the "footprint" of the quarry from 160.1 acres to 193.1 acres. The proposed expansion would yield approximately 21.5 million tons of aggregate reserves. These reserves, in combination with existing entitled reserves, would result in the quarry producing 33.2 million tons of aggregate products over a 59 year period. Proposed reclamation activities would be initiated in those areas of the quarry that have been depleted of resources in a manner concurrent to on-going mining operations. All proposed reclamation activities would be fully completed within five years of resource depletion (e.g., five years after mining activities have stopped). Lands within the quarry would be reclaimed to open space uses, including seasonal water storage, riparian habitat, oak woodland habitat and chaparral vegetation. Based upon the above, the Proposed Project is defined as all mining operations associated with the proposed 33 acre expansion area and reclamation of the entire quarry site, as expanded. The full 193.1 acre site is referred to as either the Proposed Project area, or Proposed RPA area.

No change in annual production volumes or intensity is proposed beyond currently permitted levels. Table 2.1-1 provides a summary of the Proposed Project.

Table 2.1-1. Summary of the Proposed Project

General Site Information	
Applicant	Hanson Aggregates Mid-Pacific
Property owners	Mission Lakes LLC, Hanson Aggregates, Major Domo LLC and Santa Margarita Ranch LLC
Quarry address	16815 El Camino Real, Santa Margarita, CA 93453
Current approved Reclamation Plan area	159.7 acres
Mining extension area	33.2 acres
Total Reclamation Plan Amendment area	193.1 acres
Project Assessor Parcel Numbers	Existing: 070-091-037, 070-121-021, 070-131-018, 070-131-022, 070-141-006, 070-141-054, 070-154-033. Proposed Expansion: 070-131-003
Elevation	1,350 feet to 880 feet above mean sea level
General Plan designation	Rural Lands (RL) and Agriculture (AG)
Combining designation	Extractive Resource Area (EX1) and Flood Hazard (FH)
Williamson Act contract	No
Mineral Resource Zone (MRZ) designation	MRZ-2 and MRZ-3
Current land use	Hard rock mining/processing and open space
Mining	
Extraction area	75 acres

Table 2.1-1. Summary of the Proposed Project	
Maximum mining depth	880 feet above mean sea level
Average depth of mining	250 feet
Mining slopes	Northwest and West Sectors: 25-foot-wide benches every 50 feet and a bench face angle of 70°. Slopes North, Northeast and East: 25-foot-wide benches every 50 feet with a bench face angle of 60°.
Type of minerals	Construction aggregate (granite)
Remaining entitled reserves	11.7 million tons
Reserves gained from mine extension	21.5 million tons
Total reserves	33.2 million tons
Average annual production	544,877 tons
Maximum annual production	700,000 tons
Average daily truck trips	89 (round trips, excluding pickup trucks)
Max daily truck trips	294 (round trips, excluding pickup trucks)
Commencement of mining	Continuation of existing active operation
Estimated duration of mining	59 years of mining and 5 years for reclamation: total 64 years
Anticipated mine depletion	2070
Reclamation	
Reclamation area	193.1 acres
Reclamation slopes	42.5 acres with 25-foot-wide benches spaced every 50 feet and 1.25:1 non-benched slopes on weathered rock
Reclamation vegetation	Oak woodland, chaparral, riparian
Duration of final reclamation	5 years
Anticipated completion of reclamation	2076
Post mining land use	Open space

The operation of an aggregate quarry is highly variable and dependent on market demand. Under typical conditions, activities associated with any given work shift tend to be the highest during the first three to four hours of that shift, and subsequently taper off as the shift nears its end. However, on occasion large construction projects can demand aggregate material for continuous or nearly continuous periods of concrete pouring, which causes the quarry to operate at peak, or maximum permitted levels. The existing quarry is approved to produce 700,000 tons of aggregate material annually and generate 294 round trip truck trips per day. The Applicant is not proposing any changes to these peak rates of production and operation.

In the building and construction industry a ten-year production average is frequently regarded as a full business cycle, and, for the purposes of this EIR, a ten year average has been used to reflect typical operating conditions. For the ten year period between 2003 and 2012, the existing quarry had an average production rate of 544,877 tons of aggregate product per year. This annual average incorporates the last full calendar year of quarry operation prior to publication of the Proposed Project's Notice of Preparation and initiation of the environmental analysis prepared for this EIR (June 2013). As a consequence, this average annual production rate has been selected to reflect existing, or baseline, operation of the quarry and is reasonably expected to capture future average operation of the quarry.

Source: EnviroMINE, Inc. 2013

Figure 2.1-1

Project Location

Table 2.1-2 provides a summary of the quarry's existing operation for both average annual production and peak, or maximum, production conditions.

Table 2.1-2. Average Annual Production and Maximum Production

	Production Scenario	
Operational Feature	Average Annual Production	Maximum Production
Annual production rate (tons)	565,500	700,000
Operational days per year	260	260
Daily production rate (tons)	2,096	2,692
Operational hours per day	13 (7:00 a.m. – 8:00 p.m.) Rock sales may start at 5:00 a.m. up to 70 days per year	Average production plus up to 16 hours in each 24-hour period (6:00 a.m. – 6:00 a.m.) up to 80 days per year Rock sales may start at 5:00 a.m. up to 70 days per year
Number of round-trip truck trips per year	Less than 23,140	76,440
Estimated number of round-trip truck trips per day	Less than 89 (178 one-way trips)	294 (588 one-way trips)

2.2 Overview of Aggregate Demand

In 2006 the California Department of Conservation, Geological Survey, published a map (referred to as "Map Sheet 52") and supporting report entitled "Aggregate Availability in California" (Kohler, 2006; Kohler et al., 2006). Map Sheet 52 and its supporting report compare projected aggregate demand over a 50-year period with permitted aggregate resources within 31 study areas of the State.

Data regarding aggregate resources and projected aggregate demand that were used for Map Sheet 52 and its supporting report were updated from a series of mineral land classification reports prepared by the Geological Survey between 1981 and 2005. The mineral land classification process identifies State lands that contain economically significant mineral deposits. The primary goal of the mineral land classification is to ensure that the mineral resource potential of the State is recognized and considered in land use planning.

The 50-year aggregate demand forecast for each of the aggregate study areas presented in Map Sheet 52 and its supporting report is for the period January 1, 2006 through December 2055. Before selecting a method for predicting a 50-year aggregate demand, historical aggregate use was compared to such factors as housing starts, gross national product, population, and several other economic factors. The Geological Survey found that the only factor showing a strong correlation to historical aggregate demand was population change. Consequently, a per capita aggregate consumption forecast model was used for most of the aggregate study projections. The California Department of Finance's 50-year county population forecast was used for the model, which is based on U.S. Census Bureau data.

The per capita consumption model involved completion of the following steps: (1) collecting yearly historical production and population data for a period of years ranging from the 1960s through 2005; (2) dividing yearly aggregate production by the population for that same period to determine annual historical per capita consumption; (3) projecting yearly population for a 50-year period from the beginning of 2006 through 2055; and, (4) multiplying each year of projected population by the average historical per capita consumption, the sum of which equals a total 50-year aggregate demand. The Geological Survey noted in the report that the assumption that each person uses a certain amount of aggregate every year

is a simplification of actual use patterns, but that overall, an increase in the population leads to the need for more aggregate. Over an extended period of time (e.g., 20 years or longer), random demand impacts from major public construction projects and economic recessions tend to "level out" and consumption trends become similar to historic per capita consumption rates. The Geologic Survey has found that the per capita consumption model is effective for predicting aggregate demand in major metropolitan areas.

Map Sheet 52 and its supporting report conclude that there are approximately 4.34 billion tons of permitted aggregate resources within the 31 study areas evaluated, and that aggregate demand over the 50-year forecast period will be 13.54 billion tons. With one exception, all of the study areas have less permitted aggregate than they are projected to need for the next 50 years, and 25 of the 31 study areas have less than half of the permitted resources they are projected to need. The Proposed Project's contribution to the long-term aggregate needs of the San Luis Obispo-Santa Barbara production and consumption area (e.g., study area) would help meet the local area's market need and demand. Map Sheet 52 and its supporting report indicate that as of 2006, the San Luis Obispo-Santa Barbara study area had an estimated 77 million tons of permitted aggregate resources available, and a forecasted 50-year demand of 243 million tons, equating to an approximate 68 percent shortage.

In 2011 the Geologic Survey released Special Report 215, entitled "Update of Mineral Land Classification: Concrete Aggregate in the San Luis Obispo – Santa Barbara Production-Consumption Region, California," (Busch and Miller, 2011). Special Report 215 updated the Geological Survey's Special Report 162 (Miller, et. al., 1989), which classified Portland Cement Concrete-grade aggregate resources in the San Luis Obispo-Santa Barbara production and consumption region, as well as the region's active mines of other mineral commodities such as asphaltic concrete aggregate, base, sub-base, fill, and diatomite. Special Report 215 provides an updated 50-year projection of construction aggregate needs for the San Luis Obispo-Santa Barbara production and consumption region through the year 2060, and concludes that:

- 75 million tons of currently permitted construction aggregate reserves are projected to last through the year 2026.
- In comparison to Special Report 162, there are an additional 2,991 acres of land containing concrete aggregate resources in and near the San Luis Obispo-Santa Barbara production and consumption region.
- The anticipated consumption of construction aggregate in the San Luis Obispo-Santa Barbara production and consumption region through the year 2060 is estimated to be 263 million tons, of which 137 million tons must be concrete-grade.
- An estimated 10,700 million tons of concrete aggregate resources are available in the San Luis Obispo-Santa Barbara production and consumption region.

At its September 12, 2013 regular business meeting the State Mining and Geology Board (SMGB) approved the regulatory language for the proposed designation and termination of mineral lands within the San Luis Obispo-Santa Barbara consumption region as outlined in Special Report 215. At its November 14, 2013 regular business meeting the SMGB considered and determined that the Sector C designation assigned to the deposits of the La Panza Granitics Resource Area located southeast of the City of Atascadero should be considered a resource of regional significance and not a resource of statewide significance (SMGB, 2013).

2.3 Project Objectives

The Applicant's stated objectives for the Proposed Project are to:

1. Maintain a local, reliable and economic source of high-quality construction aggregates to serve market demands in San Luis Obispo County and the Central Coast region. Associated goals include:

    a. Ensure that a sufficient short-term supply of local construction aggregates exists to serve public and private construction projects within the region as they arise.

    b. Ensure a long-term regional supply of construction aggregates by adding 21,500,000 tons of aggregate reserves and continuing an existing aggregate source until approximately 2070.

2. Reduce the impacts of an existing mining operation to visual resources, air quality and other sensitive natural resources through site design, efficient mine planning and investment in improved quarry infrastructure.

3. Reclaim an existing mining operation to seasonal water storage, open-space and grazing uses in a manner that is consistent with Surface Mining and Reclamation Act's (SMARA's) requirements and standards.

4. Continue to provide high paying jobs for quarry employees through the extension of the quarry.

5. Allow for potential capital investment in infrastructure to increase efficiency and reduce operational impacts.

The County of San Luis Obispo (County) has determined that the basic objectives of the Proposed Project are as follows:

Concrete grade aggregate, consisting of crushed granitic rock used in Portland Cement Concrete-grade and Asphaltic Concrete pavement, is particularly important for road building and maintenance and other construction. Both the State of California (Busch and Miller, 2011) and the County, through its Conservation and Open Space Element (COSE) (County of San Luis Obispo, 2010) recognize the important role of aggregate minerals in supporting construction and economic growth within the region. The basic purpose of the proposed quarry expansion is to contribute towards fulfillment of that role.

Goals identified by County relative to the extraction and use of mineral resources are found in the COSE and include: MN 1 (Conservation and development of significant mineral deposits will be a high priority, but will be balanced with other County general plan goals and policies); MN 2 (Significant mineral resources will be protected from land uses that threaten their availability for future mining); and, MN 3 (Balance mining of mineral resources with sensitive natural resources and existing adjacent uses) (County of San Luis Obispo, 2010). The following objectives of the Proposed Project embody these goals from the COSE:

- Develop significant mineral deposits in a manner that protects sensitive natural resources and existing adjacent uses, and is consistent with other County general plan goals and policies.
- Protect significant mineral resources from land uses that threaten their availability for future mining.

2.4 Project History and Description of Existing Entitlements

2.4.1 Overview of SMARA

The State's mineral resources are regulated by the SMARA of 1975 (Public Resources Code, Division 2, Chapter 9, Sections 2710 *et seq.* and Chapter 8, Title 14, California Code of Regulations, Section 3500 *et seq.*). SMARA encourages the production, conservation and protection of the State's mineral resources, provides policy to ensure that the adverse environmental impacts associated with surface mining operations are minimized and/or avoided, and requires that mined lands be reclaimed to a usable condition at the end of a quarry's operational life through implementation of a Reclamation Plan. At a local level (e.g., incorporated cities and counties) the requirements of SMARA are achieved through the adoption of ordinances and standards for land use permitting that provide the regulatory framework under which local mining and reclamation activities are conducted. The State Mining and Geology Board (SMGB) reviews these ordinances and standards to determine if they fulfill the surface mining and reclamation procedures established by SMARA. The local agency acts as the lead agency for purposes of enforcing SMARA unless the SMGB has determined that the lead agency's local ordinances are deficient or its enforcement has been inadequate, as defined in Public Resources Code section 2774.4 and 2774.5. Chapter 22.36 (Surface Mining and Reclamation) of the County's Land Use Ordinance (Title 22 of the County Code) satisfies the requirements of SMARA and the County acts as lead agency for purposes of enforcing SMARA within the unincorporated areas of the County.

2.4.2 Existing Entitlements and Approved Reclamation Plan

The current land-use entitlements governing the existing quarry consist of CUPs granted by the County, vested mining entitlements arising from the quarry's mining operations prior to 1976, and a 1981 Reclamation Plan approved pursuant to SMARA, as summarized below.

The existing quarry began operation in the 1920s and those portions of it that were mined prior to SMARA's enactment are regarded as a vested mining right (primarily Assessor's Parcel Numbers [APNs] 070-141-006 and 070-131-021). A vested mining right is a protected property right to continue legal mining operations that were initiated prior to the adoption of any State or local land use ordinances and regulations for mineral extraction without being required to conform to them. The County recognizes the quarry's pre-existing mining areas as vested, and accordingly, no use permit has been required for mining operations to continue in those areas (primarily APNs 070-141-006 and 070-131-021).

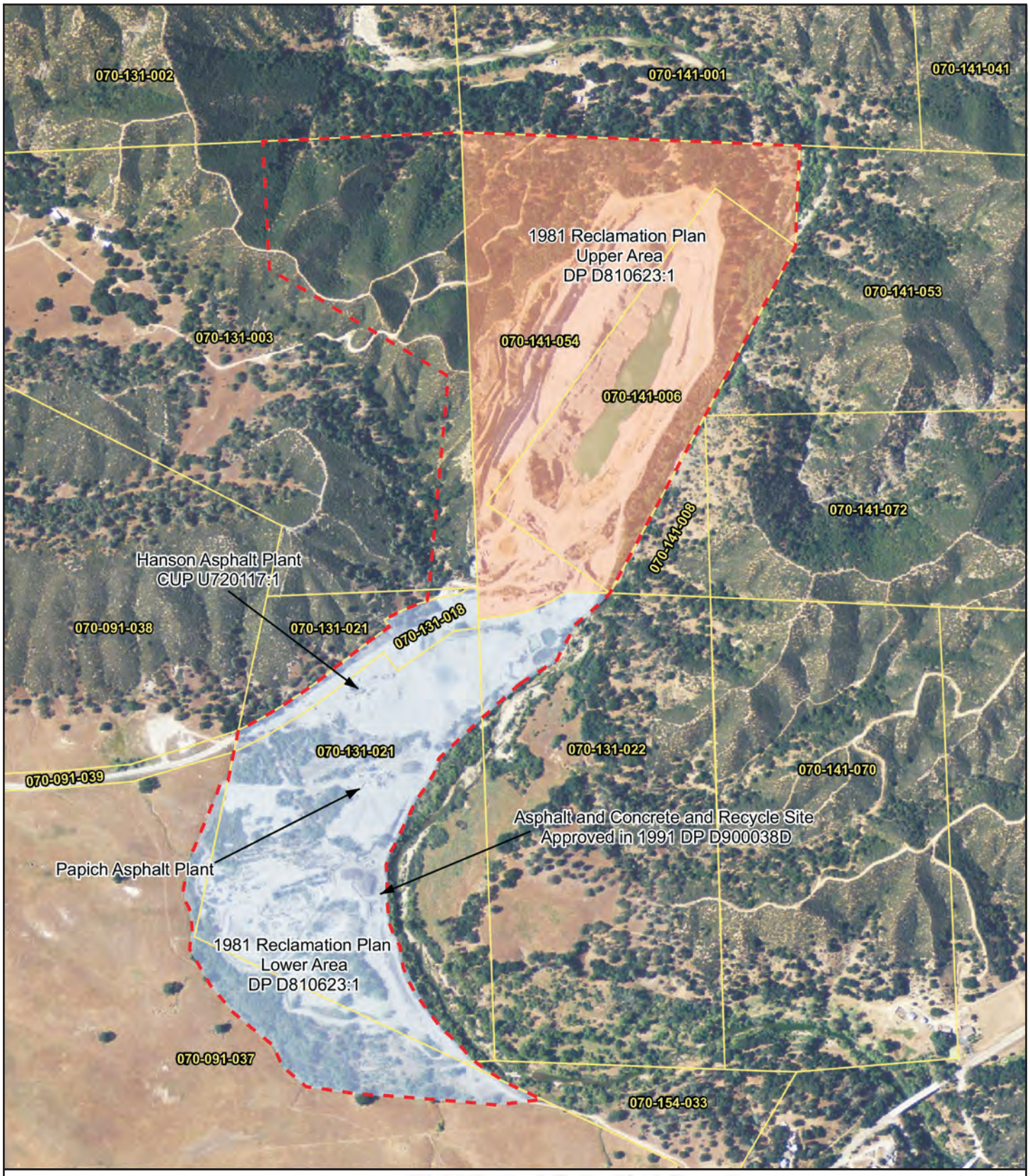
In September of 1981, the County granted a CUP that authorized an extension of surface mining operations into a 44-acre area, identified as APN 070-141-054. At that time, mining operations were ongoing within the remainder of the quarry site (primarily APNs 070-141-006 and 070-131-021). Also in September of 1981, the County approved a Reclamation Plan for the quarry. The 1981 Reclamation Plan designated an approximate 85-acre Upper Area, which is used mainly for extraction and processing of construction aggregates. The 1981 Reclamation Plan also designated a Lower Area consisting of prior mining and processing areas, asphalt production, drainage facilities and undisturbed areas. In 2005, the County granted an administrative amendment to the 1981 Reclamation Plan which allowed for steeper final slopes within the quarry, which added reserves while retaining the existing reclamation goals for the site. Figure 2.4-1 provides a map of the quarry's existing entitlements. Please refer to Table 2.5-1 in EIR Section 2.5.2 (Proposed Quarry Expansion) for a summary of all of the APNs associated with the existing quarry and the proposed expansion area.

Under the facility's existing entitlements the quarry may produce up to 700,000 tons of crushed aggregate and granite per year and load a maximum of 294 trucks (e.g., round-trip truck trips) per day. It is estimated that approximately 11.7 million tons of entitled mining reserves remain under the quarry's existing CUP. The quarry is approved to operate 260 days per year. The operational hours of the quarry generally fall between 7:00 a.m. and 8:00 p.m., Monday through Friday.

It is noted, however, that the operation of aggregate quarries is highly variable and contingent on market demand. Under typical conditions, activities associated with any given work shift tend to be the highest during the first three to four hours of that shift, and subsequently taper off as the shift nears its end. On occasion, though, large construction projects can demand aggregate material for continuous or nearly continuous periods of concrete pouring, which can cause a quarry to operate an estimated 16 hours per day until that demand is met. To accommodate the inherent and sometimes unpredictable fluctuations in market demand, the quarry's CUP allows for the following:

- Rock sales may operate for a maximum of 16 hours of each 24 hours beginning and ending at 6:00 a.m. (up to 80 days per year for a public agency contract);
- Rock sales may start operations at 5:00 a.m. (70 days per year for the general public); and,
- The Secondary Processing Plant (see EIR Section 2.5.3, Proposed Project Operations, Material Processing) can operate from 5:00 a.m. to 7:00 a.m. (June 15 to September 15)

Please refer to Appendix B for a listing of all of the entitlements and conditions of approval specified in the County's CUP, as amended in 1999, for all components of the quarry's existing operations. These entitlements and conditions of approval are considered to be part of the Proposed Project by design and would be implemented as specified.



Source: EnvironMINE, Inc., 2013.

Figure 2.4-1

Existing Entitlements

2.5 Proposed Project

As noted in EIR Section 2.1 (Project Summary), the existing quarry is 160.1 acres in size and the proposed expansion area is 33 acres in size, thereby creating a total quarry area of 193.1 acres. No changes to existing operations are proposed. The Proposed Project would extend the mining of crushed aggregate and granite by 59 years, with mining completed by the end of calendar year 2070 and reclamation completed by the end of calendar year 2076. The Proposed Project would add approximately 21.5 million tons of aggregate reserves to the quarry's operation, thereby creating a total production volume of 33.2 million tons of aggregate reserves by the end of its operational lifetime. The quarry is currently permitted to produce up to 700,000 tons of aggregate reserves annually, and no change to this maximum production rate is proposed. The Proposed Project is primarily made up of two components: on-going operation of the existing quarry into the proposed expansion area; and, reclamation of the entire Proposed RPA area.

2.5.1 Existing Quarry Operations

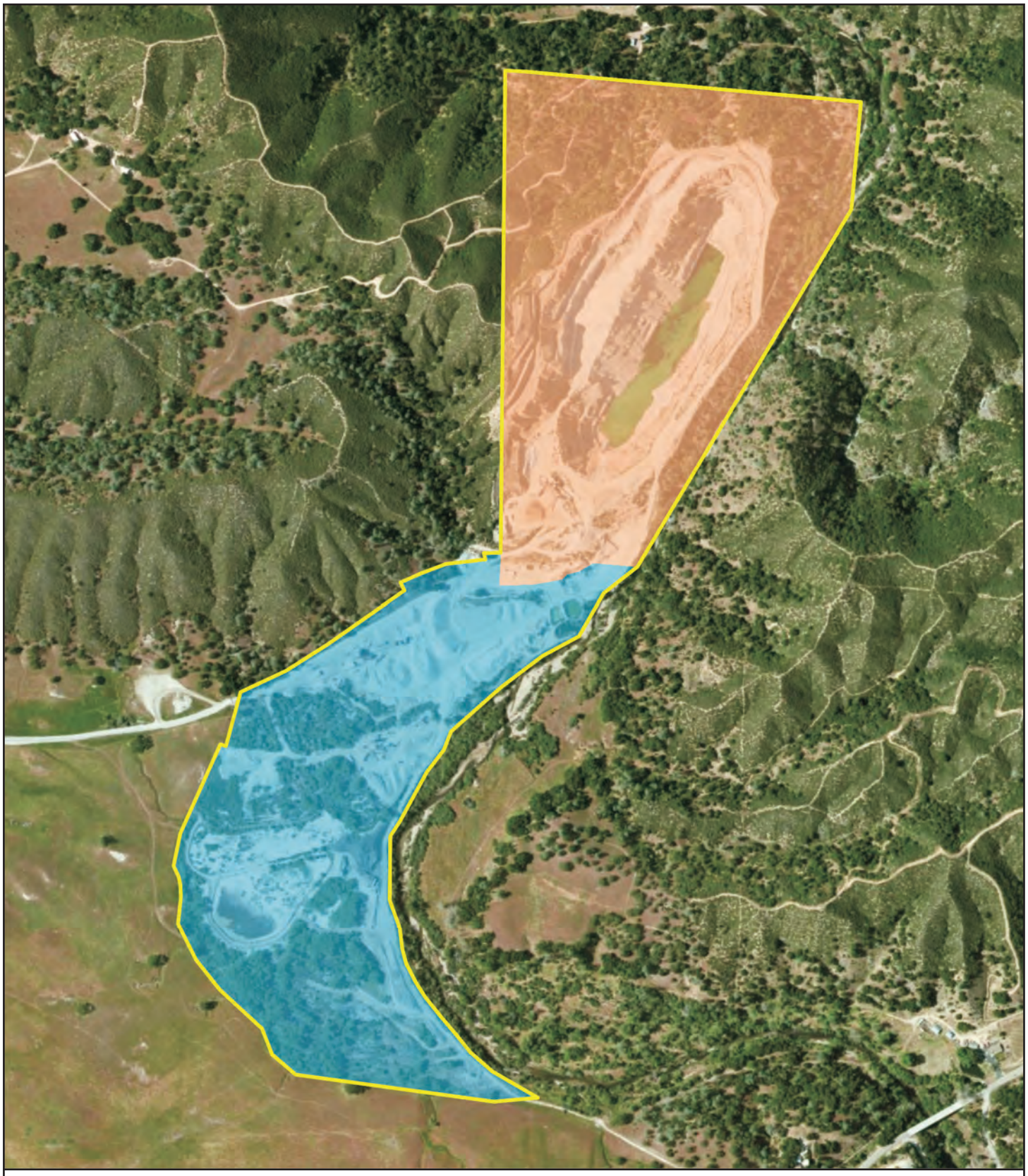
Figure 2.5-1 provides the boundaries of the existing quarry and its related 1981 Reclamation Plan. The existing quarry's Upper Area features an active hard-rock quarry, and primary and secondary aggregate processing facilities which crush, screen, wash and sort aggregate products for use or sale. The Lower Area of the quarry includes two Hot Mix Asphalt (HMA) plants, access roads, stockpiles, silt ponds and a concrete and asphalt recycling facility. One HMA is owned by the Applicant and its County conditions of approval for operation were factored into the quarry's consolidated land use permit in 1999. The second HMA, which is owned and operated by Papich Construction, was conditionally approved for operation by the County via a Substantial Conformity Determination in 2010 for a two-year period. In 2012, this HMA was provided with an approval to extend operations until either (1) July 31, 2017, (2) Phase 3 of the State Route 46 widening project is complete, or (3) the Applicant's HMA modernization and final County inspection are complete, whichever occurs last. The entitlements and conditions of approval for all quarry-related facilities, including the two HMAs, are provided in Appendix B. Figure 2.5-2 provides a map of the existing facilities and features associated with the quarry.

Access to the quarry is from a private road that intersects with El Camino Real, approximately 1.8 miles north of the State Route 58/El Camino Real intersection. The access road runs east to west, and is approximately 1.5 miles in length. The total length from the quarry entrance to El Camino Real is paved and allows for two way traffic.

The quarry currently employs 15 full-time positions for mining and processing activities, environmental compliance, safety, sales, management and administration. No change to the quarry's existing number of employees is proposed.

The quarry is mined in a stair-step fashion, with native rock drilled and blasted and then systematically removed leaving a series of mine benches. Details related to proposed quarry operations, which would be nearly identical to, and a continuation of, existing operations, are provided in EIR Section 2.5.4 (Operational Activities).

The Upper Area of the existing quarry is classified by the California Department of Conservation (DOC), Division of Mines and Geology, as Mineral Resource Zone (MRZ)-2 for Portland Cement Concrete (PCC) grade aggregate while the Lower Area is classified as MRZ-3. The Division of Mines and Geology, considers PCC to be an "indispensable, high grade construction aggregate which is costly to transport" (Miller, et. al., 1989). Areas classified as MRZ-3 contain aggregate material; however, the value of these resources has not yet been determined for the San Luis Obispo County area due to a lack of data (Miller, et. al., 1989).



Source: EnviroMINE, Inc. 2013

Figure 2.5-1

Existing RPA Boundaries and Lower and Upper Areas of the Existing Quarry

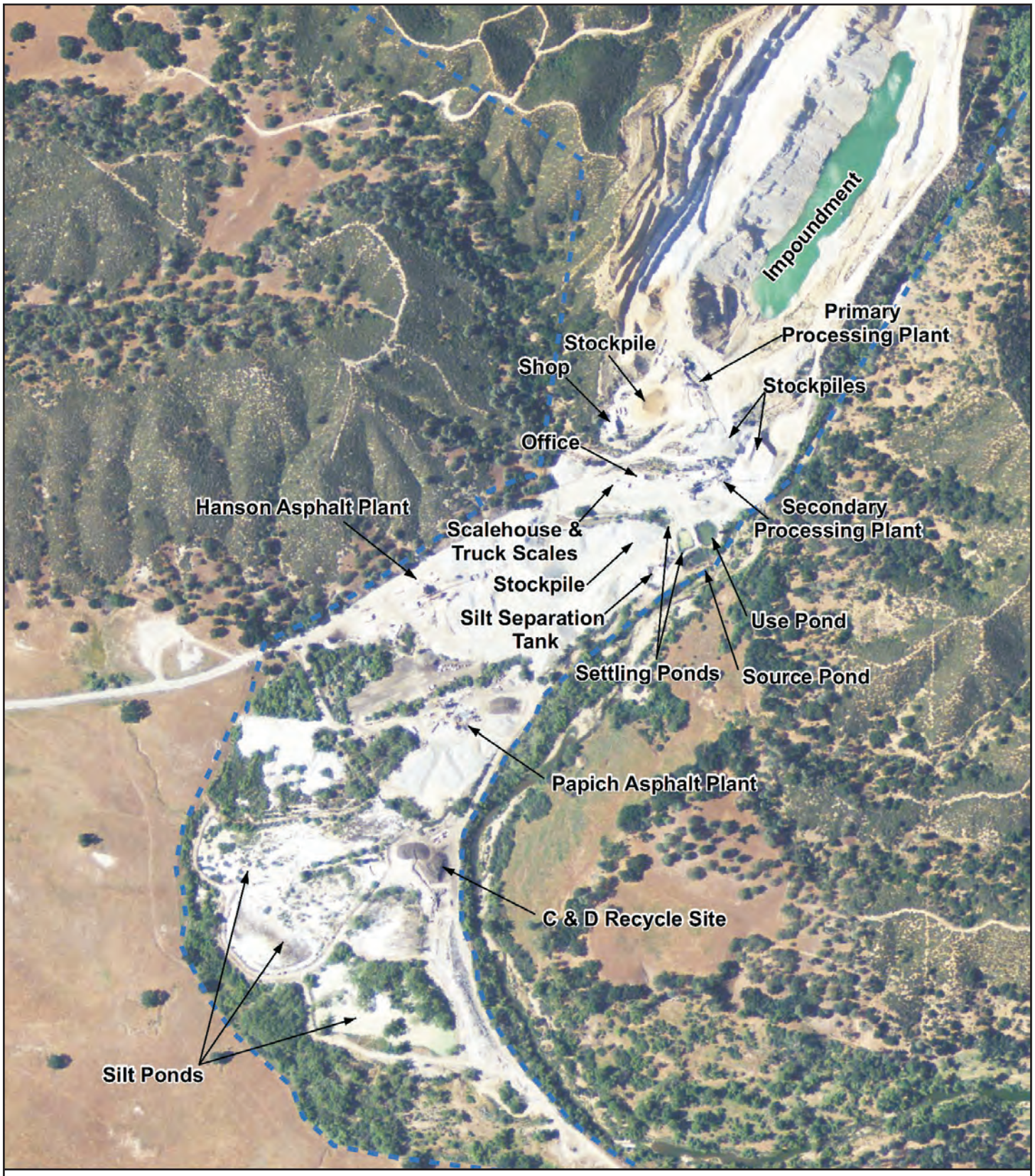


Figure 2.5-2

Existing Aggregate Processing Facilities

Source: EnviroMINE, Inc. 2013

2.5.2 Proposed Quarry Expansion

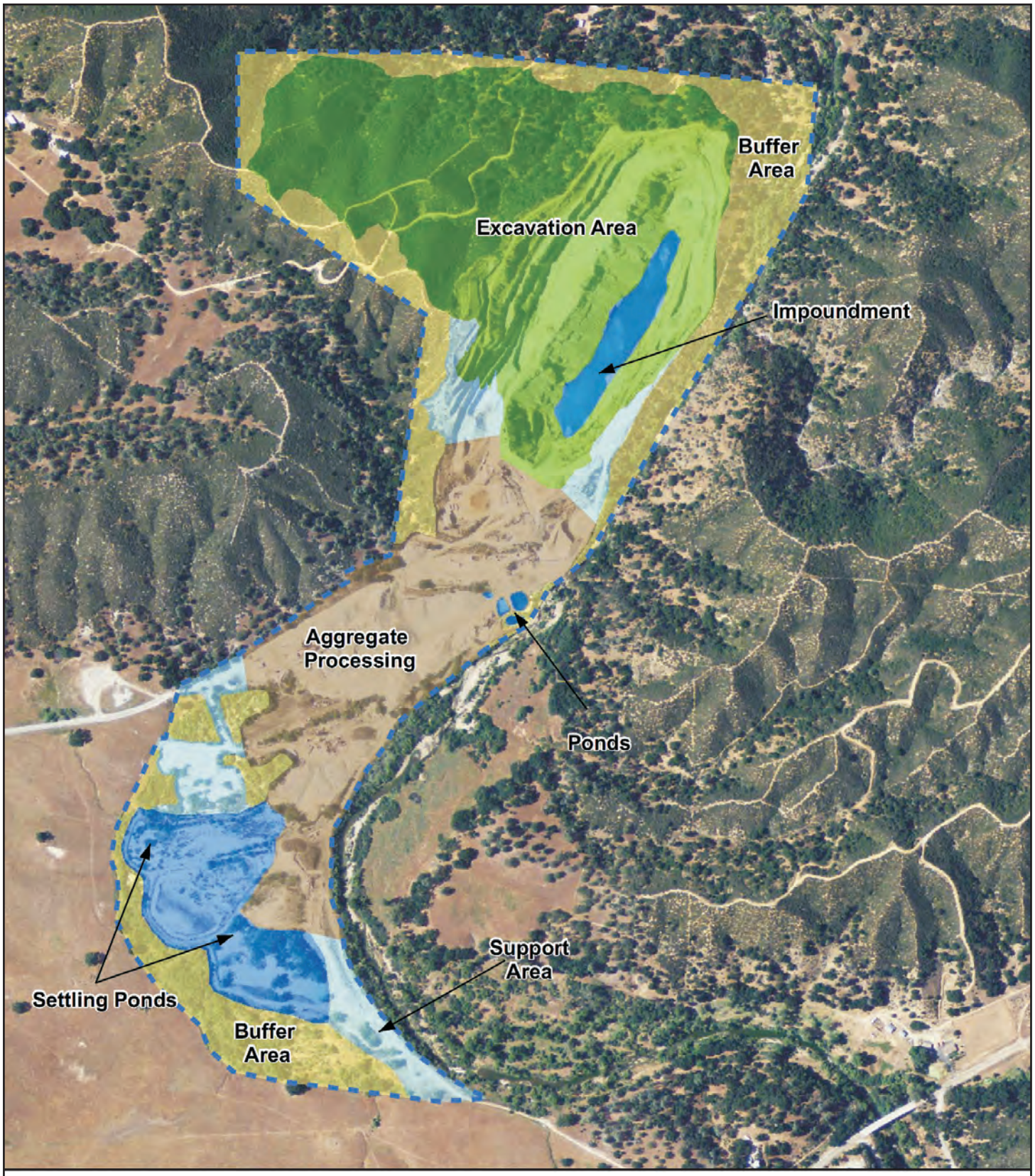
The Proposed Project area is located on eight APNs that are owned by Mission Lakes LLC, Santa Margarita Ranch LLC, Major Domo LLC and Kaiser Sand and Gravel. Kaiser Sand and Gravel was acquired by the Applicant in 1992. The remaining properties are leased, as needed, by the Applicant. Table 2.5-1 provides a summary of the APNs associated with the Proposed Project. Please refer to EIR Section 4.10 (Land Use) for a map of the subject APNs.

Table 2.5-1. Summary of APNs Associated with the Proposed Project

APN	Total Acres	Acres in Proposed Project/ RPA Area	Owner	San Luis Obispo County Land Use Designation	San Luis Obispo County Combining Land Use Designation	Proposed Expansion Parcel?
Upper Area Parcels						
070-131-003	205.79	33.22	Mission Lakes, LLC	RL (Rural Lands)	EX1 (Extractive Resource Area)	Yes
070-141-054	50.16	50.16	Mission Lakes, LLC	RL (Rural Lands)	EX1 (Extractive Resource Area)	No
070-141-006	35.85	35.85	Mission Lakes, LLC	RL (Rural Lands)	EX1 (Extractive Resource Area)	No
Lower Area Parcels						
070-131-022	78.67	5.34	Kaiser Sand and Gravel	RL (Rural Lands)	EX1 (Extractive Resource Area)	No
070-121-021	73.38	46.77	Kaiser Sand and Gravel	RL (Rural Lands)	FH (Flood Hazard)	No
070-091-037	1,708.78	16.22	Major Domo, LLC	AG (Agriculture)	FH (Flood Hazard)	No
070-154-033	17.35	0.1	Kaiser Sand and Gravel	RL (Rural Lands)	FH (Flood Hazard)	No
070-131-018	5.43	5.43	Santa Margarita Ranch, LLC	RL (Rural Lands)	FH (Flood Hazard)	No

The existing quarry is made up of five types of operational areas, all of which would be maintained "as is" or otherwise enlarged, as described below, under the proposed expansion. Figure 2.5-3 provides a map of these areas and Table 2.5-2 provides the acreage associated with each of them under the Proposed Project.

Excavation Area. The Excavation Area, or pit, is where mineral extraction currently takes place and would continue to occur until aggregate resources are depleted. It is estimated that there are 11.7 million tons of aggregate reserves within the currently permitted Excavation Area according to the current mining plan and geotechnical constraints, and that its proposed 33 acre expansion would add an additional 21.5 million tons of aggregate reserves to the quarry's production. Currently there is a 10-acre Impoundment within the Excavation Area that collects rain water and surface water runoff from within the pit and surrounding slope faces. This collected water is subsequently used for dust suppression activities (see EIR Section 2.5.4, Proposed Quarry Operation, Water Use and Management). The Impoundment would be modified, as needed, by the Applicant during proposed expansion of the Excavation Area. Currently, the Excavation Area has elevations ranging from approximately 880 feet above mean sea level (amsl) to 1,350 feet amsl.



Source: EnviroMINE, Inc. 2013

Figure 2.5-3

Existing and Proposed Operational Areas

Aggregate Processing Area. The Aggregate Processing Area is used for the processing and storage of mined aggregate. This area is approximately 42 acres in size with gentle slopes ranging from an estimated 960 feet to 1,050 feet amsl. It is made up of a collection of crushing, conveying, screening and washing facilities that processes rock into an assortment of types and grades of aggregate products. Aggregate products are either stockpiled until picked up by customers' haul trucks, or used by one of the two HMA Plants. The Aggregate Processing Area also includes a concrete and asphalt recycling facility, and support buildings and roads.

Table 2.5-2. Primary Components of the Proposed Project

Component	Acreage
Excavation area	74.7
Buffer areas	45.1
Aggregate processing area	41.9
Support areas	20.9
Water supply and use areas	10.5
Total	193.1

Support Areas. The Support Areas serve as general use areas for ongoing mining and processing. They contain access roads and disturbed areas surrounding the Excavation Area and Aggregate Processing Area.

Water Supply and Use Areas. The Water Supply and Use Areas currently make up and estimated 16.5 acres of the quarry area, and would be maintained "as is" under the proposed expansion. These areas are used during aggregate processing as either a source for wash water or as settling, or silt ponds. In total there are three settling ponds, one Use Pond and one Source Pond (Figure 5.2-3). Wash fines from the Secondary Processing Plant (see EIR Section 2.5.4, Proposed Quarry Operations, Material Processing) are pumped to these ponds where suspended particles settle out. These ponds are periodically cleaned out for maintenance purposes. Please refer to EIR Section 2.5.4, (Proposed Quarry Operations, Water Use and Management) for an additional discussion of the quarry's existing and proposed water needs and uses.

Buffer Areas. Approximately 45.1 acres of Buffer Areas would be located within the boundaries of the Proposed RPA area (Figure 2.5-3). Within the proposed expansion of the Extraction Area the Buffer Areas would include undeveloped lands that are characterized mostly by steep hillsides and thick vegetation. Existing and proposed Buffer Areas do and would continue to protect the quarry from land use encroachment, and also protect nearby land uses from some aspects associated with the quarry's operations. Under the Proposed Project no disturbances would occur within the Buffer Areas.

2.5.3 Proposed Quarry Phasing

Under the proposed quarry expansion, mining operations within the Excavation Area would occur in four overlapping phases. As detailed in EIR Section 2.5.4 (Proposed Quarry Operations), each phase would include: vegetation removal, topsoil salvaging and overburden stripping; blasting; shot rock extraction and transport; and, material processing. Concurrent reclamation would occur with mining where practicable on those benches that have achieved their final contours. Final reclamation of the Proposed RPA area would be completed after Phase IV has been completed. It is anticipated that all four mining phases and final reclamation would all be completed in approximately 64 years. Figure 2.5-4 shows the locations of each phase of proposed expansion of the Excavation Area and Table 2.5-3 summarizes each mining and final reclamation phase.

Table 2.5-3. Proposed Project Phases

Mining Phase	Estimated Period	Estimated Duration (years)[1]	Acreage[2]	Total Production (tons)	Overburden Removal (tons)
Phase I	2013 to 2031[3]	19	38.8	10,509,407	1,000
Phase II	2015 to 2045	31	13.3	8,374,201	584,300
Phase III	2041 to 2061	21	11.7	8,947,765	525,800
Phase IV	2056 to 2071	16	10.9	5,299,941	489,900
Final Reclamation	2072 to 2076	5	(Entire Proposed RPA Area)	N/A	N/A
Phase I – IV Totals			74.7	33,131,314	1,601,000

1 - The estimated duration of each phase assumes an average annual production rate of 565,500 tons of aggregate material per year, which represents an approximate four (4) percent increase (20,600 tons) over the average annual production rate noted in Table 2.1-1, which has been used for the purposes of this EIR's analysis. It is noted, however, that the precise location and timing of mining and reclamation is subject fluctuations in annual production due to market demand, variations in geologic conditions encountered in the field, and technological advancements in the mining process. The estimated duration of each mining phase is therefore considered to provide a reasonable projection of future operations, consistent with CEQA Section 21080(e)(1).

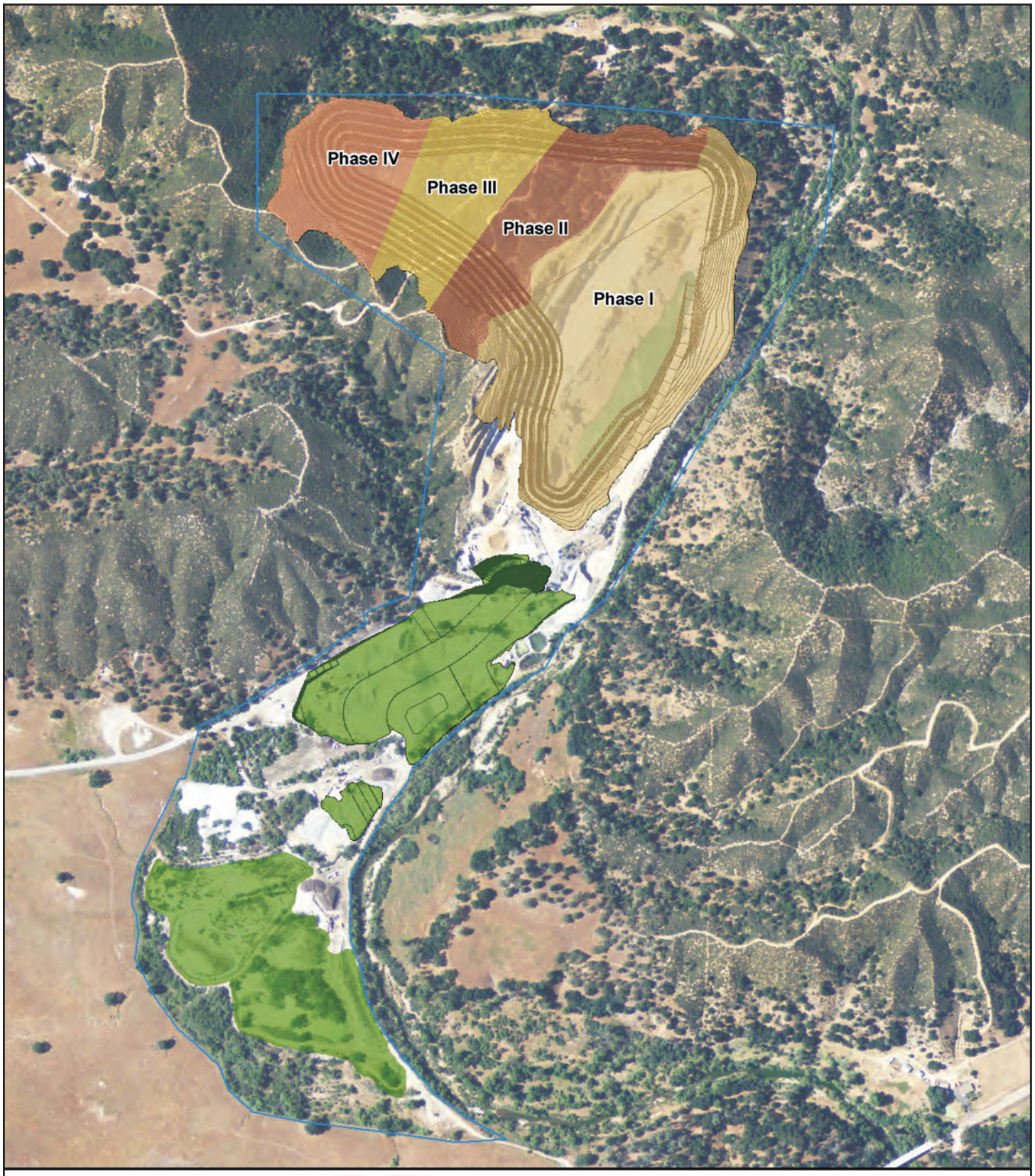
2 - Phase I mining would occur under the quarry's existing entitlements and within the currently approved Excavation Area. Phase II mining would occur within a portion of the Excavation Area that is currently approved for aggregate extraction, as well as a portion of the proposed expansion area. Phase III and IV mining would occur entirely within the proposed expansion area.

3 – Phase I of the Proposed Project would be initiated after the quarry's existing conditions of approval for gross total aggregate production is depleted. The specific date of implementation for Phase I of the Proposed Project cannot be predicted with certainty due to fluctuations in market demand of the quarry's annual production in any given future year.

Phase I. Phase I would occur over a period of approximately 19 years, and would be conducted entirely within the boundaries of the 1981 Reclamation Plan area. Phase I would consist of continued resource extraction, minor overburden stripping, and initiation of reclamation of the final quarry slopes that are visible from State Route 58.

All remaining overburden stripped during Phase I would be temporarily stockpiled on the eastern side of the mining area associated with Phase I (Figure 2.5-4). Extraction in Phase I would begin to establish final benches on all sides of the perimeter, except for the northwestern cut face, which would be the active mining cut face as mining progresses into Phase II. Extraction during Phase I would maintain the final excavation pit floor at an elevation of 880 feet amsl. Construction of the quarry ramp providing access to the excavation pit floor would also be finalized in Phase I. This ramp would be utilized throughout the life of the quarry for material transport and access to the excavation pit floor.

Benches created during Phase I would consist of a series of 25-foot-wide horizontal benches at vertical intervals of 50 feet along the perimeter. Once the benches are complete, each would receive 24 inches of uncompacted growth medium (e.g., overburden and topsoil replacement) on its finished surface and then seeded per the specifications of the Proposed RPA. This progression would be followed throughout each phase of mining, and priority would be given to the reclamation of those benches that are visible from State Route 58.



Source: EnviroMINE, Inc. 2013

Figure 2.5-4

Proposed Quarry Phasing

Phase II. Phase II would occur over an estimated 31 years and involve the mining of approximately 13 acres of land. Mining in Phase II would begin immediately following approval of the Proposed Project and would occur concurrently with Phase I. Initiating Phase II immediately following approval would allow the Applicant to reduce the visual impacts associated with State Route 58 by realigning those cut faces that are visible this roadway. At full build out, Phase II would be mined to the same elevation as the other mining phases, with a bottom excavation pit elevation of 880 feet amsl. A primary crusher and overland conveyor would be installed during Phase II, as shown in Figure 2.5-5 This conveyor would connect the Excavation Area to the Primary Processing Plant, thereby reducing the number of haul trucks and truck trips needed to transport mined material from the cut face to the Aggregate Processing Area.

All overburden stripped from Phase II would be temporarily stockpiled on the east side of the Phase I mining area (Figure 5.2-4), adjacent to the Phase I overburden stockpile.

Phase III. Phase III would include the mining of 12 acres over an approximate 21-year period, with extraction activities within Extraction Area continuing to progress in a northwesterly direction. Mining would continue in the same manner as Phases I and II, with 25-foot-wide benches placed at 50 feet intervals. Mining during Phase III would also maintain a bottom excavation pit elevation of 880 feet amsl. Topsoil and overburden would be stockpiled along the eastern side of the Phase I mining area.

Operations during Phase III would continue to utilize the same processing equipment and infrastructure that was installed during Phase II. The primary crusher and conveyor may, however, be relocated during Phase III to position it closer to the active mining area.

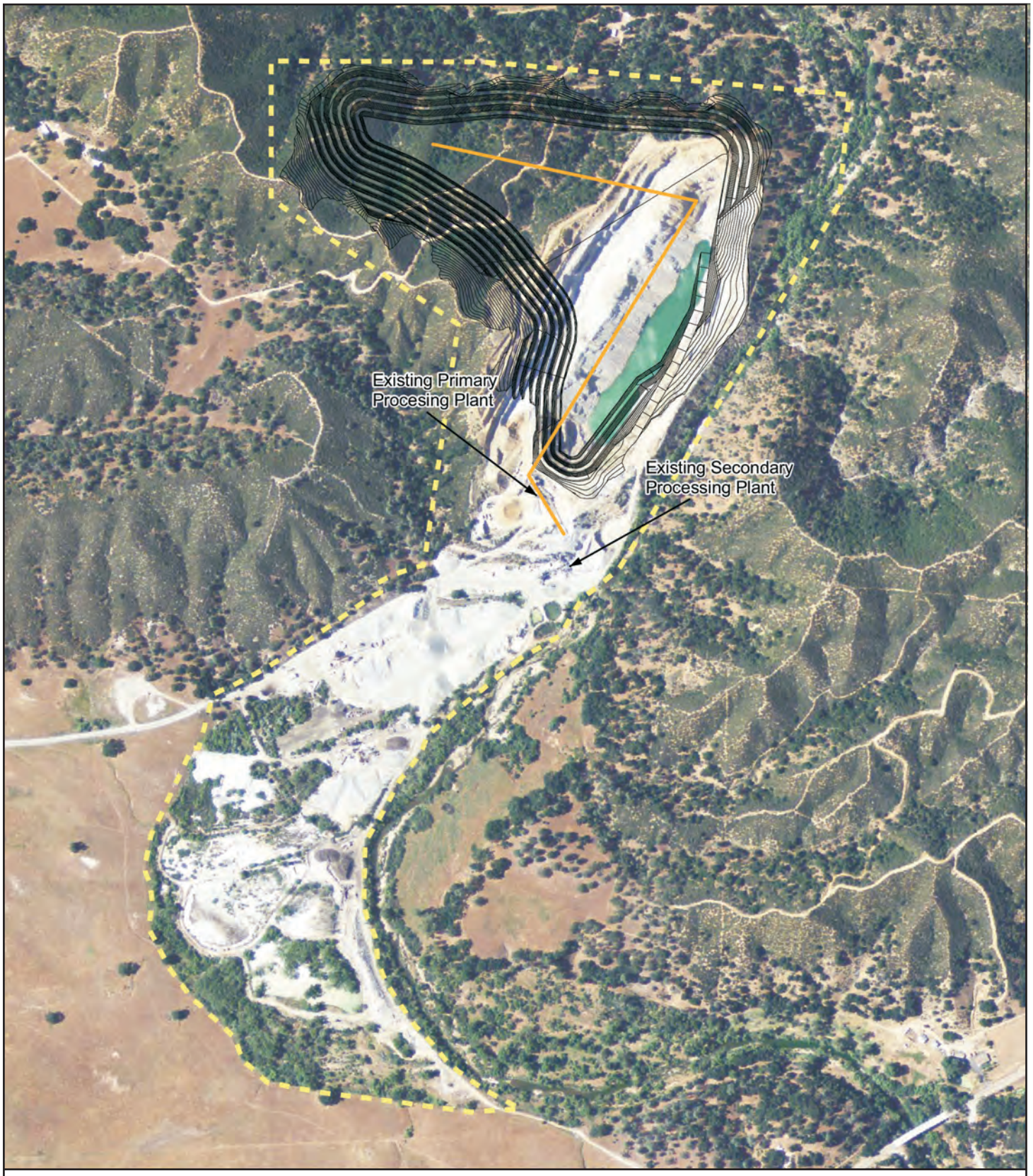
Phase IV. Phase IV would be the final phase of extraction and would have a footprint of approximately 11 acres. Mining under Phase IV would occur under an estimated 16-year period. Final reclamation of some areas of the Proposed RPA area would also be completed during this phase. Mining in Phase IV would continue to expand the Excavation Area to the northwest. Along with establishing all of the final slopes in the northwest corner of the quarry, Phase IV would also establish any remaining quarry benches that were not completed during the previous mining phases. Phase IV would also maintain the excavation pit floor at an elevation of 880 feet amsl, and additionally include any earth moving activities needed to establish the final landform designed and engineered for the Proposed RPA (see EIR Section 2.6, Reclamation Plan Amendment).

Mining would be carried out as it was during Phases I though III. As the mine advances to the northwest, the primary crusher and overland conveyor may again be relocated closer the active mine benches and additional overland conveyors could be installed.

Final Reclamation. Final reclamation of the Proposed RPA area would take place after all mining activities are complete. Any remaining unreclaimed areas would be reclaimed during this phase. The Final Reclamation Phase would involve: equipment removal; establishment of remaining quarry benches; Lower Area grading; ripping compacted areas; finish grading; seed mix distribution; direct planting; monitoring; maintenance; and, final Proposed RPA area closure. All of these activities together would achieve the goals of the Proposed RPA. Please refer to EIR Section 2.6 (Reclamation Plan Amendment) for further details regarding proposed reclamation activities.

2.5.4 Proposed Quarry Operations

As with current operations, mining of the Proposed Project during each mining phase begin with vegetation removal, topsoil salvaging and overburden stripping, followed by blasting, shot-rock extraction and transport, and material processing. A summary of each of these operational activities is provided below. Waste management, water use and management, storm water and erosion control, equipment use, maintenance and fueling, support facilities, utilities, and site security and safety are summarized as well.



0 650 1300 Feet

Proposed Conveyor Alignment
Proposed Project Boundary
Proposed Expansion Area

Source: EnvironMINE, Inc., 2013.

Figure 2.5-5

Proposed Overland Conveyor Alignment

Vegetation Removal, Topsoil Salvaging and Overburden Stripping. Topsoil and overburden removal would begin with the removal of all vegetation from the immediate area where new mining would occur.

Once the targeted mining area is cleared of vegetation, topsoil would be salvaged and overburden would be relocated to expose the granite reserves. The topsoil salvaged would vary depending on site-specific conditions; however, salvage would typically consist of approximately the top six inches of soil located within the Extraction Area for each mining phase.

Overburden materials include soils, clays, and low quality granite that are not suitable for construction aggregate use. The quantity of overburden produced for the duration of mining has been estimated at approximately 1.6 million tons. Approximately 50,000 cubic yards (cy) of overburden would be retained for reclamation purposes; the remaining overburden would be sold or used at the quarry for final grading.

Temporary overburden stockpiles would be seeded to limit erosion while awaiting use in the reclamation process. The stockpiles would be approximately 50 feet in height with slopes no steeper than 2:1. The stockpiles have been designed with drainage control to ensure that all stormwater runoff is treated using Best Management Practices (BMPs). Overburden and topsoil material stockpiles would be located within the excavation pit, and drainage would be directed inward to eliminate the potential for sediment to migrate off site. Stormwater controls would be monitored continuously to ensure that all BMPs are functioning properly.

Blasting. Blasting would be required to fracture and loosen "in-situ" rock. A licensed blasting contractor would be retained to complete all blasting-related activities in compliance with applicable regulations of the San Luis Obispo County Sheriff's Department, federal Mine Safety and Health Administration (MSHA), California Division of Occupational Safety and Health (Cal-OSHA), and federal Department of Homeland Security, and Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF).

All blasting operations would follow the quarry's existing practices. Currently, blasting occurs approximately twice per month and between 11:00 a.m. and 1:00 p.m. Prior to blasting an air rotary drill is used to bore 30-foot deep holes into the granite. The holes are then loaded with ammonium nitrate and fuel oil (ANFO) or a similar substance, cast boosters, detonation cord and initiators. The blast is then detonated by a licensed and certified blaster. Each blast yields approximately 13,000 cy of fractured rock. Figure 2.5-6 provides a photograph of a typical blasting event at the quarry.

The licensed blasting contractor is, and would continue to be, responsible for performing all blasting-related activities, including:

- Drill pattern design;
- Pre-blast inspection;
- Loading of explosives;
- Pre-blast notifications and warning signaling;
- Blasting safety procedures;
- Blasting area security;
- Post-blast inspections and re-entry procedures; and
- Blast log and history.

There would be no on-site storage of explosives. Explosives would be transported to the quarry for each day of blasting by a licensed and permitted explosives delivery contractor.

Aspen Environmental Group

Figure 2.5-6

Typical Blasting Activity

Shot Rock Extraction and Transport. After blasting, a shot rock pile would form at the toe of the active mine bench. The size of each rock in the shot rock pile would be approximately 40 inches in diameter or less. The shot rock would be extracted with either a hydraulic excavator or a front-end loader and loaded into off-road haul trucks for transport to the Aggregate Processing Area (Figure 2.5-3). However, during proposed expansion Phase II (see EIR Section 2.5.3, Proposed Quarry Phasing, Phase II) a primary crusher and overland conveyor would be installed to transport the majority of the shot rock from the excavation pit to the Aggregate Processing Area. As noted previously, this conveyor would reduce the number of on-site haul truck trips and reduce diesel emissions in comparison to current operating conditions.

On-site haul roads within the quarry would vary depending on the geographic area associated with each mining phase; therefore, the location of haul roads would change throughout the lifespan of the quarry. As noted in EIR Section 2.5.3 (Proposed Quarry Phasing), the proposed primary crusher and conveyor system could be relocated closer to active benches during each mining phase to minimize both the number of haul trucks needed for product transportation and the distance of associated access roads.

Material Processing. The Primary and Secondary Processing Plants identified in Figure 2.5-2 consist of equipment and facilities that crush, screen, wash, sort and temporarily store processed materials prior to sale and distribution. These plants currently use, and would continue to use the following equipment and facilities:

- Secondary and tertiary crushing units;
- Vibrating screens and rock washing units;
- Conveyors linking processing facilities with stockpiles;
- Finished material stockpiles;
- Access roads; and
- Clarifying water basin.

Material processing under the proposed expansion would follow existing quarry operations. Fractured granite would first be delivered the Primary Processing Plant located southwest of the Extraction Area. The Primary Processing Plant reduces the size of aggregate down to eight inches in diameter or less. The crushed rock is then shipped via belt conveyors to a surge pile, where it is loaded onto an underground conveyor and fed to the Secondary Processing Plant. At the Secondary Processing Plant the product is further crushed, screened and washed. The finished product is then stockpiled at the Secondary Processing Plant for ground loading into customer trucks, or conveyed to one of the HMA Plants (Figure 2.5-2).

Waste Management. No permanent stockpiles of mining overburden and unused rock material would remain after the Final Reclamation Phase. Domestic refuse is and would continue to be collected in approved trash bins and removed from the Proposed RPA area by a contracted waste removal service. No toxic, hazardous or flammable substances would be used and stored on site other than those needed for equipment maintenance and fueling.

Water Use and Management. Water would continue to be required for material washing and dust suppression, as described below. Under the proposed expansion, the quarry would require a total of 363.8 acre feet per year (afy) of water for aggregate processing and dust suppression.

- *Dust Suppression Water.* Current water requirements for dust suppression are approximately 55 afy. Under the proposed expansion at full development dust suppression water needs would increase by 2.8 afy, for a total maximum water need of 57.8 afy. During the majority of the year, water is and would continue to be pumped out of the Impoundment for dust suppression (Figure 2.5-2). During

periods when the Impoundment is dry, typically in the late fall until the start of the rainy season, supplemental water for dust suppression is and would continue to be pumped from the Use Pond (Figure 2.5-2). The Total volume of water pumped from the Impoundment averages, and would continue to average, 50 afy and the remaining five afy are pumped from the Use Pond. The additional 2.8 afy of water required for dust suppression under full development of the proposed expansion would be supplied from the Use Pond.

- *Wash Water for Aggregate Processing.* Current operations of the quarry require 306 afy of water for the processing of aggregates. No change to the volume of water required for aggregate processing would occur because no change to the volume of annual aggregate production is proposed. Water for the aggregate processing is and would continue to be supplied from the Use Pond, which is recharged from the Source Pond (Figure 2.5-2). The Source Pond is fed by the Salinas River. From the Use Pond water is then piped into the Secondary Processing Plant. Water needed for aggregate processing is and would continue to be cycled through the Secondary Processing Plant where clays and silts become suspended in the water. The sediment laden water is subsequently pumped from the Secondary Processing Plant to a series of sediment ponds where residual sediment settles out (Figure 2.5-2). Of the 306 afy circulated through the Secondary Processing Plant, it is estimated that 10 percent of the water is and would continue to be consumed during processing, and the remaining 90 percent is and would continue to be retained in the sediment ponds. Annual water usage does and would continue to depend on the amount of production and percentage of material that requires washing. Mining and material production volumes would continue to vary from year-to-year as market demand increases or decreases.

Stormwater and Erosion Control. The existing quarry is designed to control surface runoff to protect surrounding land and water resources in accordance with applicable local, State and federal requirements. All proposed quarry expansion operations would comply with the existing quarry's approved National Pollutant Discharge Elimination System (NPDES) General Permit for industrial activities. Best Management Practices (BMPs) would be implemented in accordance with the existing quarry's Storm Water Pollution Prevention Plan (SWPPP). Drainage and erosion controls would apply during all phases of operation and reclamation and would be designed to exceed 20-year storm events.

Equipment Use, Maintenance and Fueling. Conventional earth moving equipment is and would continue to be used to extract material from the quarry. Typical equipment includes front-end loaders, dozers, off-road haul trucks, rock drills and water trucks. Table 2.5-4 identifies the expected maximum amount of equipment that is and would continue to operate in the quarry. The equipment use noted in Table 2.5-4 is identified as a percentage of time that the equipment is and would continue to be operational relative to the hours that the quarry is open. No changes to existing equipment types, numbers or uses would occur.

Table 2.5-4. Typical Equipment Types and Use

No.	Make	Type/Model	Purpose	Usage
2	Cat	988 Front end loaders	Primary mining loaders	90%
2	Cat	980 Front end loaders	Loading customer trucks or transport to HMA Plant	90%
2	Cat	773 Haul trucks	Transport material from excavation pit to primary crusher	90%*
1	Cat	D9 Track dozer	Strip overburden and push shot rock	75%
1	Cat	235 Excavator	Maintenance	5%
2	Peterbilt	4,000-gallon water trucks	Dust Suppression	75%
1	Cat	226 B Skid-steer loader	Plant Maintenance	5%
1	Cat	14 G Motor grader	Road Maintenance	5%

* Use of 773 haul trucks would be reduced to approximately 50 percent after the proposed overland conveyor system is installed.

Equipment is maintained in the quarry's existing Shop located southwest of the Primary Processing Plant (Figure 2.5-2). Fuel for off-road equipment is and would continue to be supplied by an existing 10,000 gallon above-ground diesel storage tank located immediately to the east of the Shop. An existing and approved Spill Prevention Control and Countermeasures Plan (SPCCP) would be implemented to guide reporting controls and cleanup activities in the event of a spill within the quarry or other operating areas.

Support Facilities. Continued operation of the quarry into the proposed expansion area would additionally include on-going use of the following existing support facilities: three portable buildings for the scale-house and office; portable restrooms; and, 70-foot long truck scales.

Utilities. Utility needs associated with the Proposed Project would remain identical to those associated with existing operations. One septic tank exists on-site and is used by personnel that work within the portable office buildings. All other areas of the quarry are serviced by portable restrooms, which are maintained at appropriate intervals. Drinking water is and would continue to be provided by a vendor. Electrical power is provided by Pacific Gas & Electric Company (PG&E) through an existing overhead distribution line that enters the site near the front gate. No upgrades to the power line would be required to satisfy the needs of the Proposed Project.

Site Security and Safety. During the lifetime of the Proposed Project public access would be controlled by gates on the access roads within the quarry's boundaries. These gates would be locked during non-operating hours. Appropriate signage would also be posted around the perimeter of the quarry's expanded boundaries to advise the public that trespassing is not permissible. All applicable MSHA and Cal-OSHA rules, regulations, and standards would be implemented to protect both the public and on-site employees.

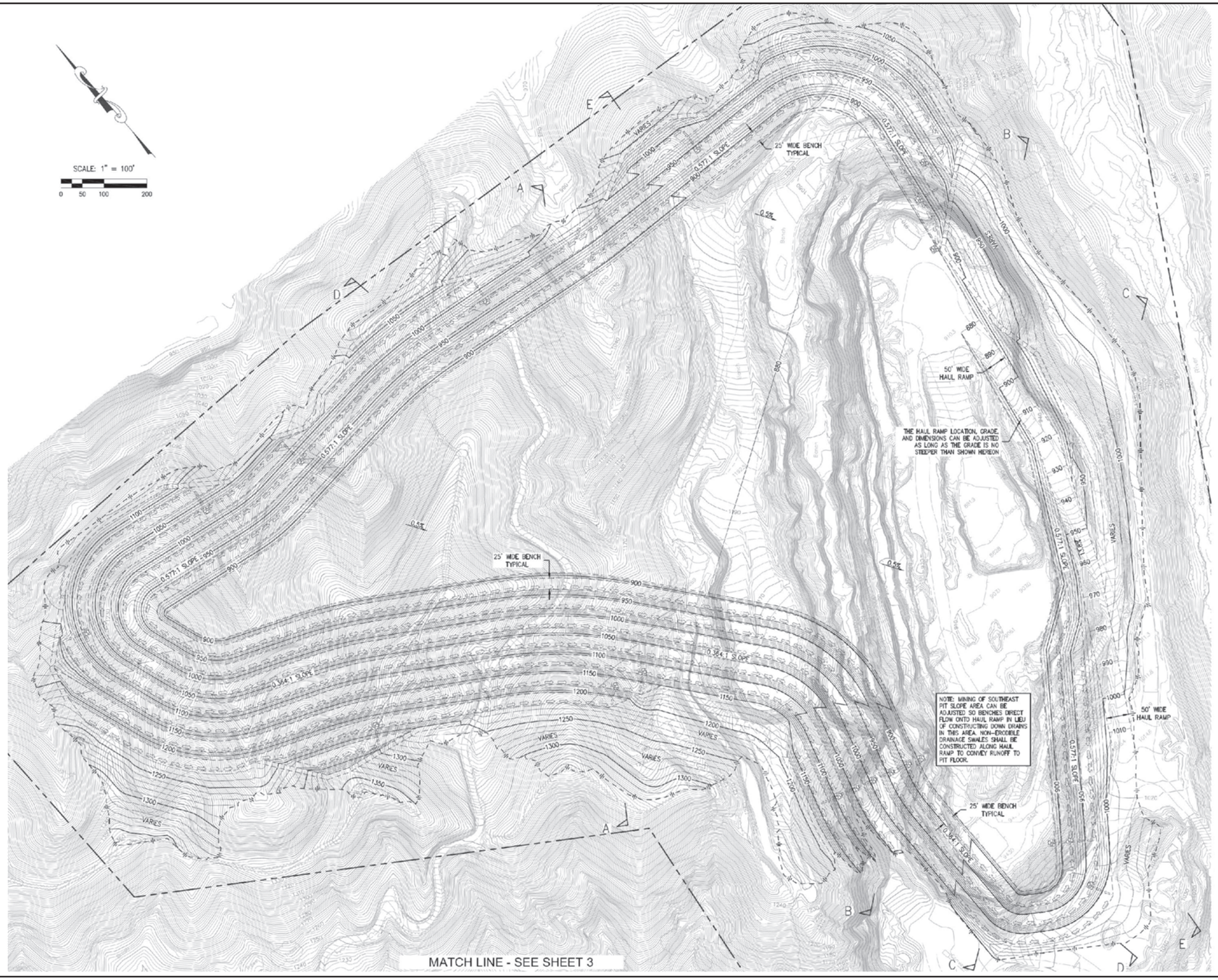
Lighting is installed and would continue to be maintained at the Primary and Secondary Processing Plants. Generally, pole-mounted sodium, metal halide, or fluorescent lighting is and would continue to be used. All lighting fixtures are and would continue to be shielded and directed downward to prevent off-site light and glare. No new lighting is proposed.

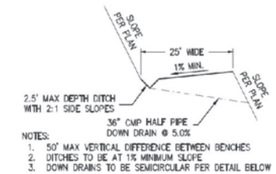
2.6 Reclamation Plan Amendment

Reclamation describes the process of preparing mined lands for alternative post-mining uses, and removing residual mining hazards. The existing quarry's Reclamation Plan was approved in 1981 and addresses the existing quarry's 147 acre site. The Proposed RPA submitted for the Proposed Project, dated April 17, 2013, addresses the expanded 193.1 acre site; however, only 148 acres are expected to require reclamation; the remaining 45 acres would be maintained as Buffer Areas where no disturbances would occur during mining operations.

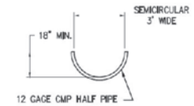
Mining activities would result in the creation of a depression in the Upper Area that has an average depth of 250 feet deep and a number of cut slopes with 25-foot-wide catch benches every 50 vertical feet around its perimeter, as shown in Figure 2.6-1. Reclamation would adapt this landform to open space uses including seasonal water storage, oak woodland habitat, riparian woodland habitat and chaparral vegetation. Figure 2.6-2 provides a map and the acreage of proposed reclaimed uses.

The Final Reclamation Phase as identified in EIR Section 2.5.3 (Proposed Quarry Phasing) would occur after completion of all mining operations. It would consist of equipment removal, rough and finish grading, resoiling, revegetation, and monitoring until reclamation performance standards are met. The Final Reclamation Phase would be divided into the Upper and Lower Areas, and anticipated to require five years to complete.



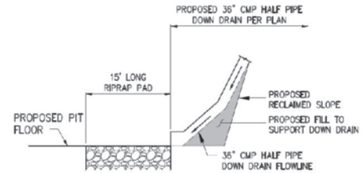


DETAIL: TYP. 25' WIDE BENCH
NOT TO SCALE

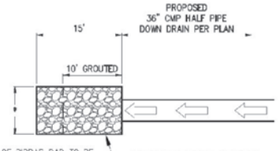


NOTE: DOWN DRAINS TO BE ANCHORED TO SLOPE USING CALTRANS DOWN DRAIN ANCHORS OR EQUIVALENT

DETAIL: 36" CMP DOWN DRAIN
NOT TO SCALE



DETAIL: 36" CMP DOWN DRAIN ONTO RIPRAP
NOT TO SCALE



DETAIL: DOWN DRAIN RIPRAP
NOT TO SCALE

Source: EnviroMINE, Inc. 2013

Figure 2.6-1
Final Excavated Quarry Area

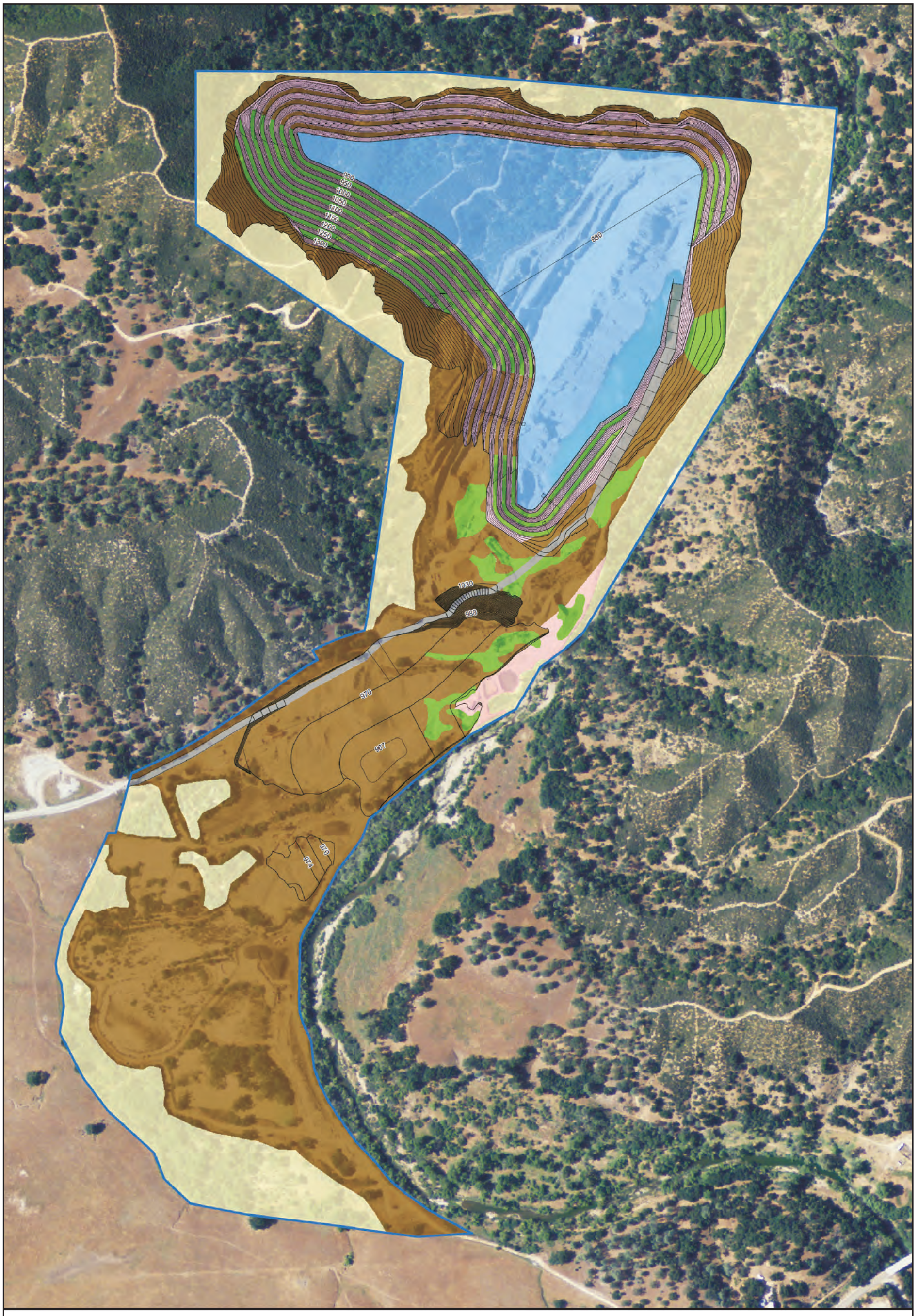


Figure 2.6-2

Final Reclamation Uses

The Applicant's Proposed RPA goals are to:

1. Adapt mined areas to open space land uses.
2. Stabilize the soil so that erosion is controlled.
3. Revegetate mined lands to create a habitat allowing for the gradual invasion and establishment of native plant species from the surrounding undisturbed plant communities through natural successional processes.
4. Reduce the visual impacts of the quarry benches visible from the surrounding areas along State Route 58.
5. Maximize the recovery of mineral resources in a safe and efficient manner; and
6. Mitigate, by design, potential environmental impacts on the land that might otherwise be created by extraction.

Plant species used for reclamation would be capable of self-regeneration without continued dependence on irrigation, soil amendments or fertilizer, and would include species representative of surrounding vegetative communities. EIR Appendix B provides details regarding the goals and activities associated with the Proposed RPA, including:

- Final Quarry Slope and Grading;
- Growth Medium Distribution;
- Soil Amendment Requirements;
- Vegetative Cover Analysis;
- Revegetation Test Plots;
- Soil Decompaction;
- Road Reclamation;
- Revegetation Species;
- Hydroseeding;
- Oak Woodland Planting;
- Riparian Woodland Planting;
- Planting Times;
- Weed Management;
- Contingency Planting;
- Revegetation Phasing;
- Success Criteria;
- Effects on Future Mining;
- Vested Interests; and
- Post-mining Public Safety.