SANTA MARIA AND SISQUOC RIVERS

SPECIFIC PLAN

This Specific Plan was adopted by the Santa Barbara County Board of Supervisors on December 9, 1997 and by the San Luis Obispo County Board of Supervisors on January 20, 1998.

Santa Maria and Sisquoc Rivers
Specific Plan

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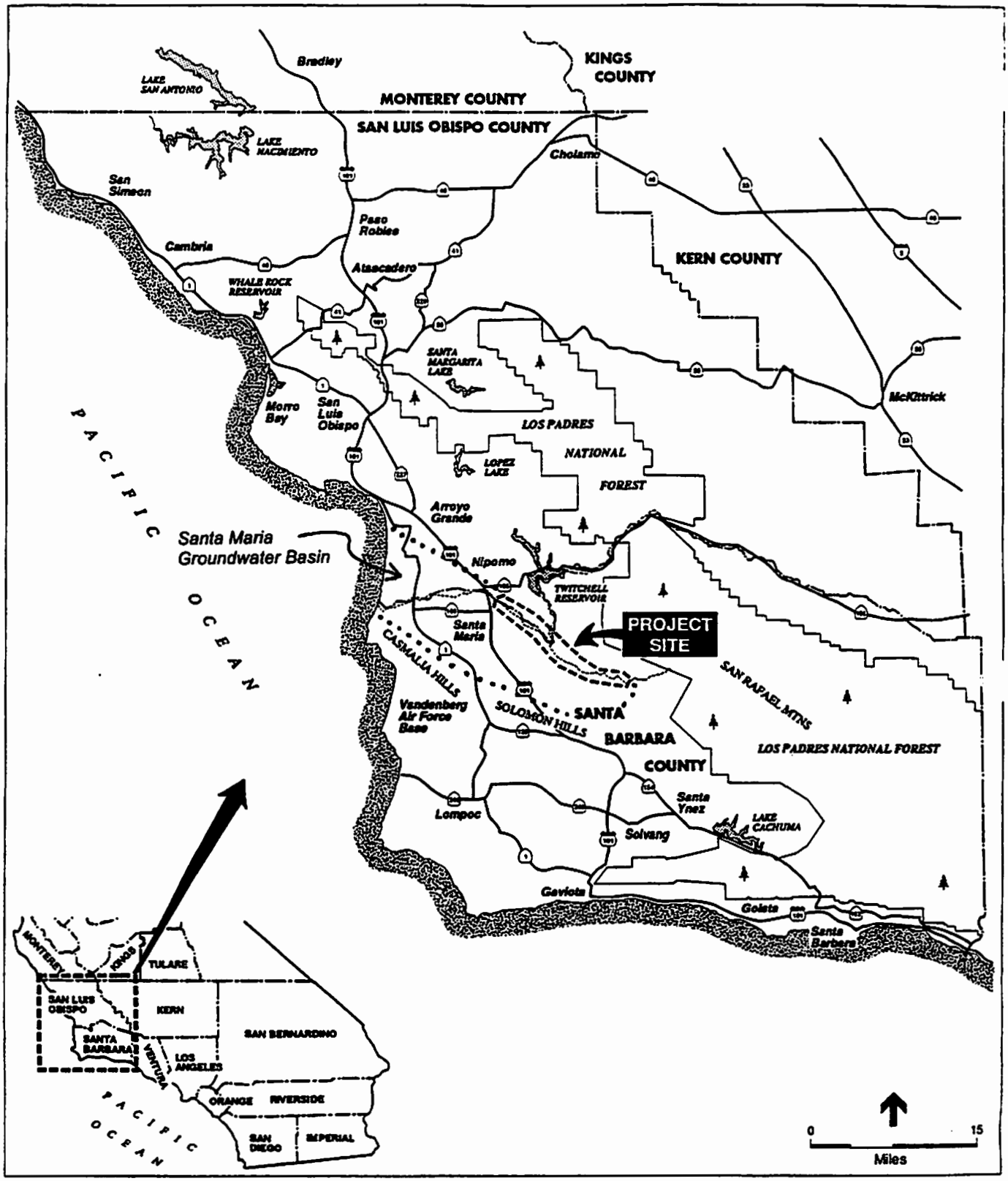
CHAPTER I: INTRODUCTION

PLAN OVERVIEW

This Specific Plan ("the Plan") is intended to serve as the primary land use and regulatory guide for sand and gravel mining and post-mining reclamation of the Sisquoc and Santa Maria Rivers, located in Santa Barbara County and San Luis Obispo County. The Plan area includes approximately 12 miles of the Santa Maria/Sisquoc Rivers from the Santa Maria City boundary at the downstream project limit to just east of the La Brea Creek confluence at the upstream project limit. The Plan also includes areas adjacent to the river channel planned for off-channel mining operations and a buffer area separating mining operations from other land uses. Mining operations within the Plan area are conducted by Coast Rock Products, Inc. and Kaiser Sand and Gravel, Inc. and are proposed to be carried out in phases over a period of 23 (Kaiser) to approximately 64 (Coast Rock) years. Mining and reclamation activities within the Plan area are under the direct jurisdiction of Santa Barbara County (2493.5 acres), San Luis Obispo County (654.7) and the U.S. Army Corps of Engineers (only within "Waters of the United States"), in consultation with various other government agencies.

The overall goal of the Plan is to provide for the long term production and conservation of the sand and gravel mineral resource in the Sisquoc and Santa Maria Rivers, in a manner compatible with existing surrounding land use, while minimizing adverse impacts to the environment. This Plan is also intended to coordinate the mining and reclamation activities of the two major mining operators in the project area and provide a long-term planning framework for all the public agencies involved in project review. This Plan sets forth goals, objectives, and policies for resource utilization and protection, and environmental protection, as well as operation, reclamation, and monitoring criteria. All actions taken by the regulatory agencies involving plan review and approval for mining and reclamation within the Plan area must be consistent with this Plan.

The Sisquoc River Upstream from Tepusquet Crossing

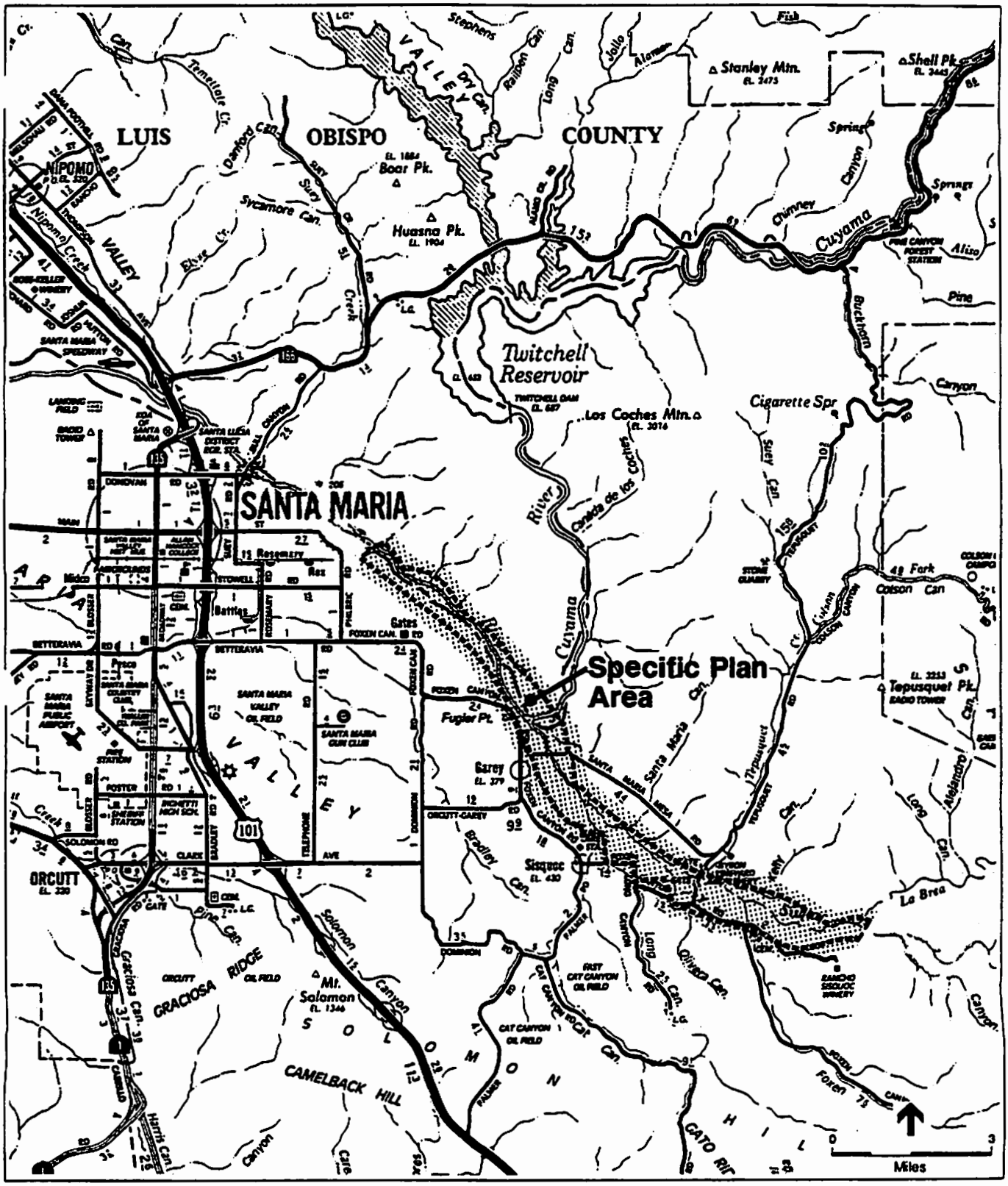


Luis Obispo County

Santa Barbara County

Figure 1
Regional Setting

Santa Maria & Sisquoc River Specific Plan

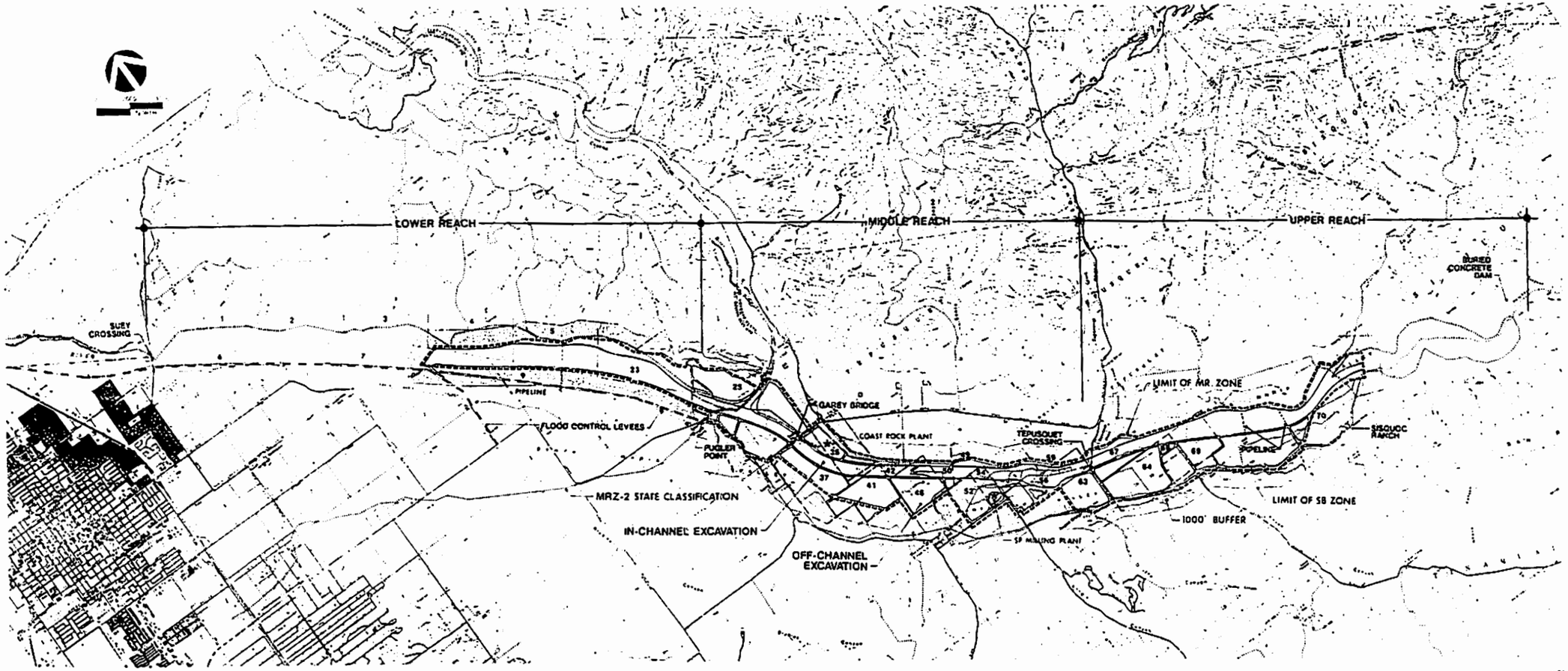


San Luis Obispo County

Santa Barbara County

Figure 2
Vicinity Map

Santa Maria & Sisquoc River Specific Plan

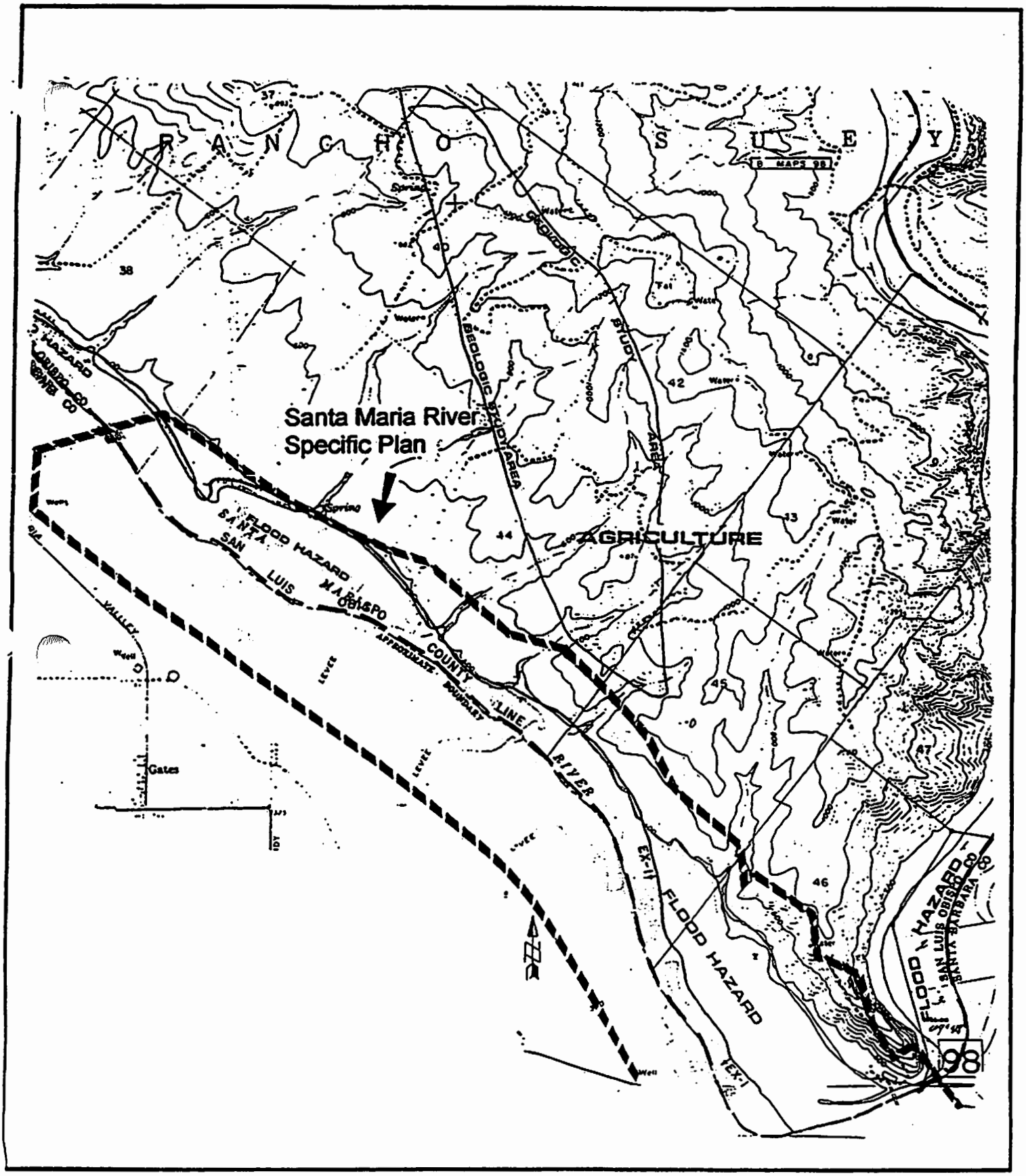


San Luis Obispo County

Santa Barbara County

Figure 3
Specific Plan

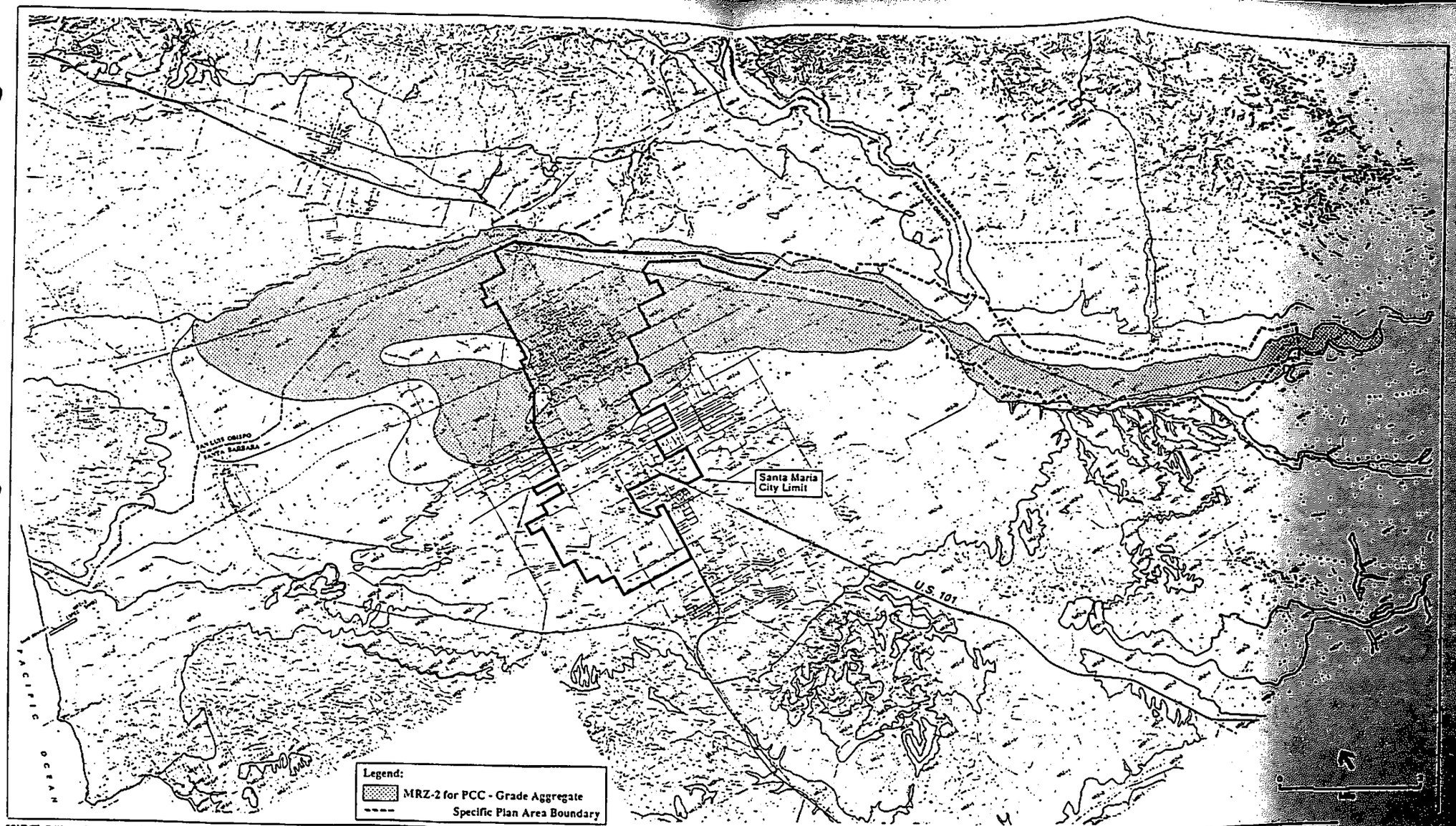
Santa Maria & Sisquoc River Specific Plan



Luis Obispo County

Santa Barbara County

Figure 4
SLO/SB Boundary



SOURCE: California Department of Conservation, Division of Mines and Geology.
Special Report 162, 1989. Plates 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27.

San Luis Obispo County

Santa Barbara County

Figure 4a
MRZ-2 Zone

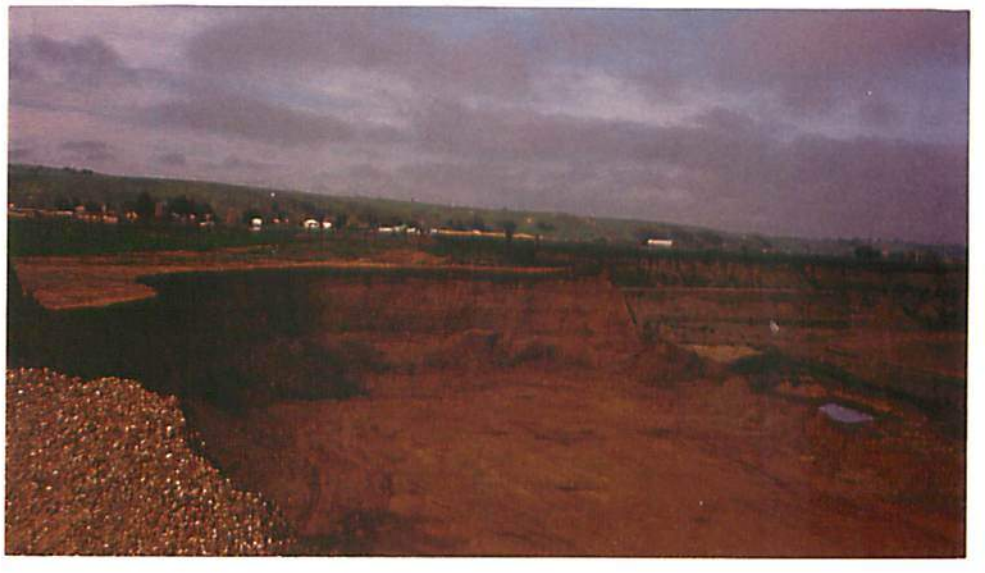
Santa Maria & Sisquoc River Specific Plan

BACKGROUND OF PLANNING PROCESS

The State of California has long recognized the importance of the aggregate resource in the Santa Maria and Sisquoc Rivers. Approximately 80% of the PCC grade aggregate used in the Santa Barbara/San Luis Obispo County Production/Consumption Region is provided from within the project area (See DMG, Special Report No. 162, attached as Appendix A). There is no similar developed source of PCC grade aggregate anywhere else in Santa Barbara County. The aggregate resource within the Plan area is centrally located within the Production/Consumption Region in close proximity to existing processing and transportation infrastructure. The California Division of Mines and Geology has placed the Plan area within an MRZ-2 zone which indicates that the resource is found in sufficient quality and quantity to be economically developed.

Mining has occurred along the Sisquoc and Santa Maria Rivers since the early 1900's. Coast Rock Products, Inc. (Coast Rock) has been mining sand and gravel along rivers since 1957. Mining operations have been occurring at the Kaiser site since the 1920's. Both Coast Rock and Kaiser Sand and Gravel (formerly known as "S.P. Milling") currently have vested rights or permits from Santa Barbara and/or San Luis Obispo Counties to operate on a number of parcels along the river system (Kaiser Sand and Gravel's operations is solely within Santa Barbara County). The currently vested and permitted areas amount to 1,573 acres in Santa Barbara County and 170 acres in San Luis Obispo County. Much of the currently permitted areas have already been excavated.

To secure additional aggregate material to allow for operations to continue once existing reserves are depleted, both operators have prepared master plans for mining and reclamation for the ultimate extent of their proposed future operations. These master plans were evaluated and refined extensively in the environmental review process. The Specific Plan implements the environmentally preferred project alternative developed through this review process (this alternative is known as MRP-1B in the Final EIS/R).



Kaiser Off-Channel Mining Pits

STATUTORY AUTHORITY

A Specific Plan is a land use planning tool used by local jurisdictions to guide the development of large acreage parcels under multiple ownership. It is intended to create a bridge between the General Plan and zoning requirements. A General Plan provides overall guidance for physical development, whereas, a Specific Plan provides more detailed policy guidance that responds to the unique characteristics of a particular site. This Specific Plan further serves as the framework for mining and reclamation plans for individual operators within the planning area.

Specific plans are prepared under the authority of Sections 65450-65457 of the Government Code of the State of California. Section 65451 mandates that a Specific Plan include a text and diagrams that include at least the following:

The distribution, location, and extent of the uses of land, including open space, within the area covered by the plan.

The Plan includes land use maps for each operation designating areas proposed for mining and reclamation, long term resource protection areas, and buffer areas between adjacent land uses. A description of each mined and reclaimed area is provided, including the sequence of mining and reclamation and the size of all affected areas.

The proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan and needed to support the land uses described in the plan.

The Plan area already includes the public and private infrastructure necessary for continuation of the existing mining operations. No new roadways, utilities, waste disposal or aggregate processing facilities are proposed or necessary at this time. Each mining operation has individual plans to address drainage, levees and haul routes at each mine site.

Standards and criteria by which development will proceed, and standards for the conservation, development, and utilization of natural resources, where applicable.

The Plan includes such standards and criteria in Chapters III-XI.

A program of implementation measures including regulations, programs, public works projects, and financing measures necessary to carry out the Plan.

The Plan implementation measures are included in Chapter XI.

RELATIONSHIP OF THE SPECIFIC PLAN TO THE GENERAL PLAN

In accordance with State law, this Specific Plan has been prepared so as to be consistent with the General Plans of Santa Barbara County and San Luis Obispo County. Each of the jurisdiction's General Plan land use diagrams permit mining operations within their respective portions of the Plan area. Additionally, each jurisdiction's General Plan contains policies which support mining and reclamation in the Plan area. This Specific Plan further implements many of these policies which are summarized below:

Santa Barbara County

The County's General Plan recognizes that "mineral resource extraction in the County makes a relatively important contribution to the local, state and national economies and, as such should be encouraged..." The General Plan notes, however, that the mining operations should be planned to avoid significant adverse impacts such as air or water quality deterioration, increased flooding and erosion, or damage to the water recharge capability of the river. These potential impacts are addressed and mitigated within this Specific Plan.

San Luis Obispo County

The Land Use Element of the General Plan states that the County should "recognize the importance of continuing availability of mineral resources by avoiding land use design which may inhibit the continuing viability of... extraction operations and result in the unnecessary or premature termination of the use of such resources." This Specific Plan proposes objectives and policies to address land use compatibility. The General Plan also sets forth policies relating to groundwater protection, wildlife habitat loss, and flood control which are addressed in this Plan.

Refer to the Final EIR for this Specific Plan for further and more detailed discussion of Specific Plan/General Plan consistency for each County.

RELATIONSHIP OF THE SPECIFIC PLAN TO SMARA

The California Surface Mining and Reclamation Act of 1975 (SMARA) was enacted by the State Legislature to create and maintain an effective, comprehensive, and regulated surface mining and reclamation policy in an effort to assure that:

- ✓ Adverse environmental effects are prevented or minimized;
- ✓ Mined lands are reclaimed to a usable condition adaptable for alternative land uses;
- ✓ Production and conservation of minerals occurs while at the same time giving consideration to values relating to recreation, watersheds, wildlife, range and forages, and aesthetic enjoyment , and;
- ✓ Residual hazards to public health and safety are eliminated.

The long-term supply of construction material to the region is considered an essential public need. As aggregate materials are used extensively in the construction and maintenance of the built environment, yet are heavy and costly to transport, it is important that the region have an adequate local supply. The Santa Maria Valley MRZ-2 deposit will be increasingly important to the region as other sources, especially riverine (Salinas River, Navajo Creek, Santa Ynez), are depleted in the future.

SMARA requires the California Division of Mines and Geology (CDMG) to identify and evaluate the mineral resources of the State, with particular emphasis on construction aggregates. The loss of regionally significant mineral deposits through poor planning and inadequate land use regulation was one of the issues that SMARA was intended to address.

Based on State Mining and Geology Board guidelines, CDMG delineated specific urbanizing regions, each defined by aggregate production and aggregate consumption being nearly equal with that region (note: the service area of the mining operations included within the Specific Plan area includes both the San Luis Obispo and Santa Barbara Production/Consumption Regions). As mandated by SMARA, CDMG then did a classification study for each region in which land was mapped and classified for the presence of significant sand, gravel or stone deposits, with emphasis on sites suitable as sources of Portland cement concrete (PCC-grade) aggregate, the most indispensable type of construction aggregate. CDMG classified aggregate deposits in the San Luis Obispo-Santa Barbara Production-Consumption (P-C) Region in the California Division of Mines and Geology's 1989 Special Report 162. The largest concentration of PCC-grade and other natural aggregate (MRZ-2) within the region is located along the Sisquoc and Santa Maria rivers, extending from a narrow canyon on the Sisquoc Ranch to about one-half mile east of Pacific Coast Highway (SR-1). Much of this resource is in the ancient flood plain beneath the City of Santa Maria and is no longer accessible because of surface improvements or conflicting land uses. The main body of accessible material is within a band along the river system upstream from Suey Crossing. Approximately 80% of the PCC-grade construction aggregate produced in the San Luis Obispo/Santa Barbara Production/Consumption Region originates from within the Specific Plan area.

SMARA (Section 2764(a)) requires that local governments implement measures to ensure protection of significant mineral resources. This includes management of land uses that may affect areas of statewide significance and measures emphasizing the conservation and development of identified mineral deposits. SMARA also requires local governments to amend the General Plan or prepare a specific plan to "plan for future land uses in the vicinity of, and access routes serving" an existing or proposed surface mining operation when so requested by the mine operator or other interested persons. The intent is to avoid incompatible land uses near the surface mining operations and to ensure that the trucks transporting aggregate do not significantly impact local traffic.

This Specific Plan is in conformance with and will further the regulations and procedures set forth in SMARA. SMARA and its related regulations are presented in Appendix B. Through the Specific Plan, and ultimately through permit conditions, the County may apply more stringent requirements to the mining operations than those outlined in SMARA.

In adopting the Specific Plan, SMARA requires that the County make written legislative findings that future land uses and access routes will be compatible with the continuation of surface mining operations. The Specific Plan sets forth land use and circulation policies that will result in protection of the resource.

As required by SMARA, the State Geology Board adopted regulations for the reclamation of mined lands. These regulations specify reclamation and performance standards for wildlife habitat, backfilling, regrading, slope stability and recontouring, revegetation, drainage, diversion structures, waterways and erosion control, prime agricultural land reclamation and other agricultural land reclamation, building, structure, and equipment removal, stream protection, including surface and groundwater protection, topsoil salvage, and mine waste management. Applicable standards are addressed at different levels of specificity, as appropriate, either in the standards of the Specific Plan or as conditions of approval for subsequent permits.

If SMARA is amended, the Specific Plan should be reviewed to ensure that it is consistent with any amendments. If any Specific Plan goals, policies, or standards conflict with a SMARA amendment, the Specific Plan must be amended to be consistent. SMARA requirements and procedures take precedence over the Specific Plan. Specific Plan amendment procedures are outlined in Chapter XI.

SPECIFIC PLAN GOALS

The purpose of the Specific Plan is to provide a regulatory framework governing mining of aggregates in the Santa Maria and Sisquoc Rivers to achieve the following public and private goals:

Mineral Resource Conservation

- Protect, conserve, and develop the MRZ-2 classified sand and gravel resource within the project area, for the benefit of the region, in a manner which minimizes or prevents adverse environmental effects and which results in reclamation of the mined lands to a safe, usable condition for alternative land uses suitable for the project area.

- Recognize and delineate the State MRZ-2 classification for sand and gravel resources within the project area.

Environmental Protection

- Allow for extraction of the sand and gravel resource in an environmentally sensitive manner to provide a continuing supply of essential high-quality aggregate material to the region.

- Limit mining operations in environmentally sensitive areas.

- Minimize interference with aquifer recharge and enhance such recharge where feasible.

- Minimize interference with sediment transport through the project area.

- Ensure that mining operations will not result in a net loss of wildlife habitat function and value within the project area compared to pre-mining conditions.

- Prohibit mining and reclamation operations from significantly impeding migration of fish through the project area.

- Minimize impacts to sensitive wildlife species as a result of mining and reclamation activities.

- Ensure that mining operations will not result in a net loss in available agricultural land within the project area or diminish the productivity of agricultural lands compared to pre-mining conditions.

- Ensure that mining and reclamation will not cause a significant increase in ongoing residual groundwater demand within the project area compared to pre-mining conditions.

Infrastructure Protection

- Conduct mining and reclamation operations in a manner consistent with protection of critical public infrastructure within and in the vicinity of the project area.

- Provide improved protection from flooding and erosion to adjacent properties and improvements.

Land Use Compatibility

- Provide measures to reduce the potential for incompatibilities between mining operations and adjacent land uses.

Economic Benefits

- Recognize and encourage the continuation of the substantial direct and indirect regional economic benefits from mining operations within the project area.

Inter-Agency Coordination

- Provide a framework for continuing inter-agency coordination during mining and reclamation operations, including coordinated periodic review, coordinated monitoring, and coordinated decision-making with respect to any amendments or revisions to the approved plan.

- Encourage coordination between mining and reclamation operations and the groundwater management activities of the Santa Maria Valley Water Conservation District and other groundwater management entities.

Compliance with SMARA and other Applicable Federal, State, and Local Regulations

- Conduct mining operations and reclaim mined lands in accordance with the requirements of the California Surface Mining and Reclamation Act, Federal Clean Water Act, Federal and State Endangered Species Act, Regional Water Quality Control Board Rules, Air Pollution Control District Rules, and other applicable laws and ordinances.

Reclamation

- Reclaim mined lands in a manner that minimizes water degradation, air pollution, damage to aquatic or wildlife habitat, flooding, erosion, and other adverse effects from surface mining operations, so that mined lands are reclaimed to a usable condition which is readily adaptable for alternate land uses

and which create no danger to public health or safety. Reclamation activities may extend to affected lands surrounding mined lands, and may require backfilling, grading, resoiling, revegetation, soil compaction, stabilization and other measures.

The goals listed above are implemented through policies, implementing standards and plan requirements listed in each of the remaining chapters of this Specific Plan. Chapters are organized by key planning topics relevant to the project with each chapter containing a brief discussion of the significance of its particular topic to the overall project plan.

In-Channel Haul Road in the Sisquoc River

USE OF THE SPECIFIC PLAN

This Specific Plan and its companion Program EIS/R present the framework for consideration of and action upon associated applications for mining and reclamation within the Plan area. This document will aid the Counties in reviewing individual permit applications throughout the life of mining and reclamation operations within the project area. Before a permit is issued, each jurisdiction must determine that the proposed mining operation is consistent with the goals, objective and policies contained in this Plan. The Plan also provides the operators applying for permits with the policy framework and criteria that will be used to evaluate their proposals.

Because the Plan area overlays multiple jurisdictional boundaries, each jurisdiction uses different terms to denote similar planning processes or persons. The following phrases and terms are used throughout this document in order to simplify the text.

Planning Director -	This term is used to refer to the Director of Planning and Development in Santa Barbara County and the Planning Director in San Luis Obispo County.
Counties -	This term is used to denote both Santa Barbara and San Luis Obispo County jurisdiction or any one where applicable.
Use Permit -	This term refers to Conditional Use Permits in Santa Barbara County and Development Plan approval in San Luis Obispo County.
General Plan -	This term refers to the General Plan for San Luis Obispo County and the Comprehensive Plan for Santa Barbara County.
Zoning Ordinance -	Refers to the Zoning Ordinance for Santa Barbara County and the Land Use Ordinance for San Luis Obispo County.

The initial phases of the mining permits and reclamation plans for Coast Rock Products and Kaiser Sand and Gravel will be approved and permitted by the regulatory agencies concurrently with approval of this Specific Plan as follows:

Agency	Permit No.	Term
Santa Barbara County		
Coast Rock Products	92-CP-074 92-RP-001	25 Years
Kaiser Sand & Gravel	86-CP-106 RV01 86-RP-106 RV01	23 Years
San Luis Obispo County		
Coast Rock Products	D920088D	25 Years
U.S. Army Corps of Engineers		
Coast Rock Products	94-50249-TS	25 Years
Kaiser Sand & Gravel	94-50885-TS	23 Years

The approval process for subsequent project phases is provided for by this Plan and discussed in greater detail in Chapters III (Mining and Reclamation Plan) and XI (Implementation).

This Specific Plan provides a regulatory and policy framework during implementation of the permits issued for the initial project phases and for future permit decisions by the regulatory agencies upon expiration of the permits listed above. The Specific Plan is adopted separately by both Santa Barbara and San Luis Obispo Counties, and the key provisions of the Specific Plan are also incorporated into the U.S. Army Corps of Engineers Section 404 permits for this project where applicable. Throughout the remainder of this document, goals, policies, standards and plan requirements cited are applicable in both Counties unless specifically limited to one County.

CHAPTER II: PLANNING AREA

LOCATION

The site is located on the northeast side of the Santa Maria Valley, approximately 16 miles from the ocean, in the central coast region of California encompassing a 12 mile reach of the Sisquoc and Santa Maria Rivers, east of the City of Santa Maria. Most of the plan area is within Santa Barbara County, except for two segments of the Santa Maria River reach which are also in San Luis Obispo County. The centerline of the Santa Maria and Cuyama Rivers forms the boundary between the two counties for this project.

LIMIT OF PROJECT

The Specific Plan area (excluding the 1000 foot perimeter mining transition area) contains approximately 3,538 acres. The Plan area lies along the Sisquoc and Santa Maria Rivers, starting at the Bradley Ditch (approximately 3 miles upstream from Suey Crossing near Suey Park in Santa Maria) and extending upstream to the current permitted limit of mining immediately east of the La Brea Creek confluence with the Sisquoc River. Approximately 2893.5 acres are within Santa Barbara County and 654.7 acres are within San Luis Obispo County. A major portion of the Plan area is controlled by Coast Rock, with the remaining 400 acres controlled by Kaiser Sand and Gravel. A 1000 foot wide perimeter mining transition area surrounds the Plan area.

RIVER SYSTEM

From the upstream limit of the Plan area, the Sisquoc River flows northwesterly for approximately 9 miles to its junction with the Cuyama River. The Santa Maria River begins at that confluence and reaches Suey Crossing approximately 8 miles further downstream. This river system is seasonal, being dry most of the year under normal conditions and for longer periods during a drought.

Twitchell Dam and Reservoir are on the Cuyama River about eight miles upstream from its confluence with the Sisquoc River. On the Sisquoc Ranch, near the upstream limit of the project, there is a buried concrete dam which was installed in the early 1900's to capture the river underflow for ranch use.

In addition to the Cuyama River, major tributaries include the Bradley Ditch, Tepusquet Creek, Foxen Creek, and La Brea Creek. There are also several smaller, unnamed tributaries which add local drainage and agricultural runoff to the flow.

The river through the Plan area meanders over a wide flood plain, except where a channel has been deepened and defined by past extraction in the streambed.

PLAN AREA FEATURES

Highway 101 crosses the river about two miles downstream from Suey Crossing outside of the project area. From Highway 101 to the confluence of the Cuyama and Sisquoc rivers, there are high bluffs along the north side of the flood plain and flood control levees define a flood limit along the south side of the river. The upstream levee ties into Fugler Point, a promontory just opposite the confluence.

Upstream from Fugler Point, there generally is a high bank on the north side of the Sisquoc River and a less clearly defined lower bank on the south side, but beginning above the confluence with La Brea Creek, there are high banks on both sides and the valley becomes quite narrow at its upper end.

The Plan area includes the Garey Bridge, Tepusquet Crossing (a seasonal river crossing), pipelines near the Garey Bridge (Unocal) and north of Tepusquet Crossing (Celeron/All American Pipeline) and flood control levees constructed by the Army Corps of Engineers and maintained by the Santa Barbara County Flood Control Distict. The Plan area also includes an existing network of unpaved haul roads used by both mining operators for existing operations. Twitchell Reservoir, although located outside of the project area, releases water through the Cuyama River into the Santa Maria River within the lower reach of the project area.

Key features of the environmental setting within the project area are discussed in subsequent chapters of this plan and in the accompanying Final EIS/R.

LAND USE

The project site encompasses a maximum of approximately 8,000 acres including the Coast Rock and S.P. Milling mining and reclamation plan (MRP) areas, as well as a 1,000-foot buffer area between the MRP boundaries and surrounding areas to protect the mining operations from future incompatible land uses on adjacent lands.

Existing land uses within the project site consist primarily of mining in the existing river channel, agriculture and flood control improvements. Because of the abundance of aggregate material, mining has occurred along the Sisquoc and Santa Maria rivers since the early 1900's. Coast Rock has been mining sand and gravel along the rivers since 1957. Mining in the Sisquoc River at the Sisquoc Plant, now owned by Kaiser Sand and Gravel, has been ongoing since the mid 1920's. Both Coast Rock and Kaiser currently have vested rights or permits from Santa Barbara and/or San Luis Obispo counties to operate on a number of parcels along the river system. The areas with conditional use authorization amount to 1,760 (1,420 acres - Coast Rock, 64 acres - Kaiser) acres in Santa Barbara County and 170 acres in San Luis Obispo County. Much of the currently permitted land outside the river channel has already been excavated. Upstream from Fugler Point, land adjacent to the river is primarily in cultivated agricultural production, with the exception of the two existing aggregate processing plants. Downstream from Fugler Point, the conditions are different. In this lower reach, the Santa Maria River cuts through a wide, uncultivated flood plain, limited on one side by flood control levees and on the other side by abrupt bluffs.

Much of the hilly terrain above the bluffs on the north side of the Santa Maria River is currently devoted

to cattle grazing. There has been limited grazing on the flood plain terrace land. Outside of the levee on the southwest side of the river is an active landfill operated by the City of Santa Maria. The Coast Rock plant and stockpile area is located on the northeast side of the Sisquoc River, just upstream from the Garey . Kaiser's plant is on the southwest side of the river, downstream from the Tepusquet Crossing.

Twitchell Dam and Reservoir were constructed on the Cuyama River about eight miles upstream from its confluence with the Sisquoc River in 1957, abruptly ending aggregate transport in the Cuyama River. On the Sisquoc Ranch, east of the upstream limit of the project, there is a buried concrete dam which was installed in the early 1900's to capture the river underflow for ranch use. This buried dam has no effect on downstream transport of aggregate.

Outside of the levee on the southwest side of the river, outside of the project area, is an active landfill operated by the City of Santa Maria.

The towns of Garey and Sisquoc are both less than a mile south of the Sisquoc River.

PARCELIZATION AND OWNERSHIP

All of the parcels within the project area are identified by a plan key number on Figure 3. The parcels are generally grouped by ownership. A corresponding property information list is attached as Appendix C. It includes for each plan key number the assessor's parcel number, zoning, ownership interest, and owner's name. Also part of Appendix C is a list of landowner addresses.

CHAPTER III: MINING AND RECLAMATION

INTRODUCTION

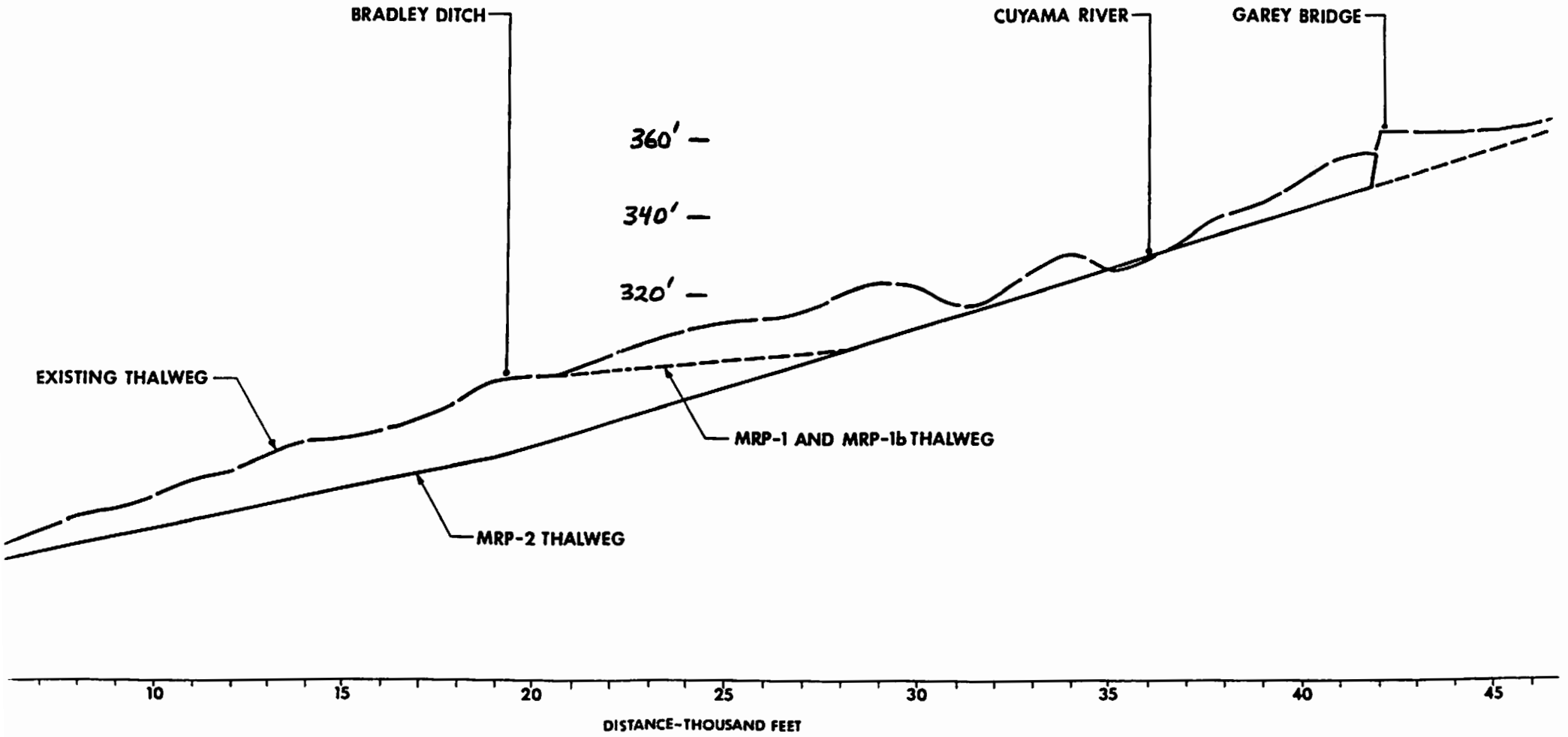
There are two mining operators within the project area, Coast Rock Products, Inc. and Kaiser Sand and Gravel, Inc. The Coast Rock project area is approximately 3,138 acres, including 654 acres within San Luis Obispo County and the remaining area in Santa Barbara County. The Kaiser project area is approximately 400 acres and is entirely within Santa Barbara County. Mining and reclamation operations within each operator's project area will be described separately below. A discussion of issues, plan policies, and implementation standards associated with these mining and reclamation plans will follow the descriptions of each mining operation.

COAST ROCK PROJECT AREA

In-Channel Mining & Reclamation: Under the provisions of previous permits and in areas where vested rights to mine exist, mining historically has not been conducted within flowing waters of the rivers in the project area. The current in-channel mining plan for the Coast Rock project area also does not include any mining in waters while the river is flowing. Mining is planned to take place in-channel away from areas with flowing water and in areas where flows have receded. In-channel mining will be limited to widening and deepening the river channel in areas of the river where previous mining has occurred. The average depth of excavation within the river channel will be approximately 5-6 feet below the existing low point of the river bed (the thalweg), and will, in most cases take place bank to bank across the width of the existing channel. However, in areas of the channel away from the thalweg, where previous mining has not occurred, the depth of excavation can be as much as 20 to 25 feet. The gradient of the completed channel will be similar to the slope of the existing channel with transitions to existing grade at the upstream and downstream limits of the project (See Figures 6-8).

In channel mining will occur over the life of the project with an emphasis on completion of mining and reclamation in the upstream reach of the river within the first 10 years of the project and completion of mining and reclamation in the reach between the Garey Bridge and the Kaiser project area within 50 years. Mining in a portion of the proposed middle and lower reach expansion area will continue over the entire life of the project until the ultimate channel depth and width are achieved. Material will be removed in this lower reach in several lifts over a period of decades with significant periods of time between excavation of each lift (See Conceptual Lower Reach Mining Plan, Figure 9).

The ultimate channel that will be left upon completion of mining will be 400 to 1200 feet wide and will be designed to convey a hundred year flood. The banks of the channel will have 3:1 finished slopes and the tops of the levees separating in-channel from off-channel operations will be at least 50 feet wide. Bank protection is not proposed except where required by the Flood Control District in certain critical areas (such as tributary confluences) where erosion risk is great. The mining operators are required to maintain the levees during the life of the project with property owners responsible thereafter. All channel side slopes will be revegetated with suitable native species.

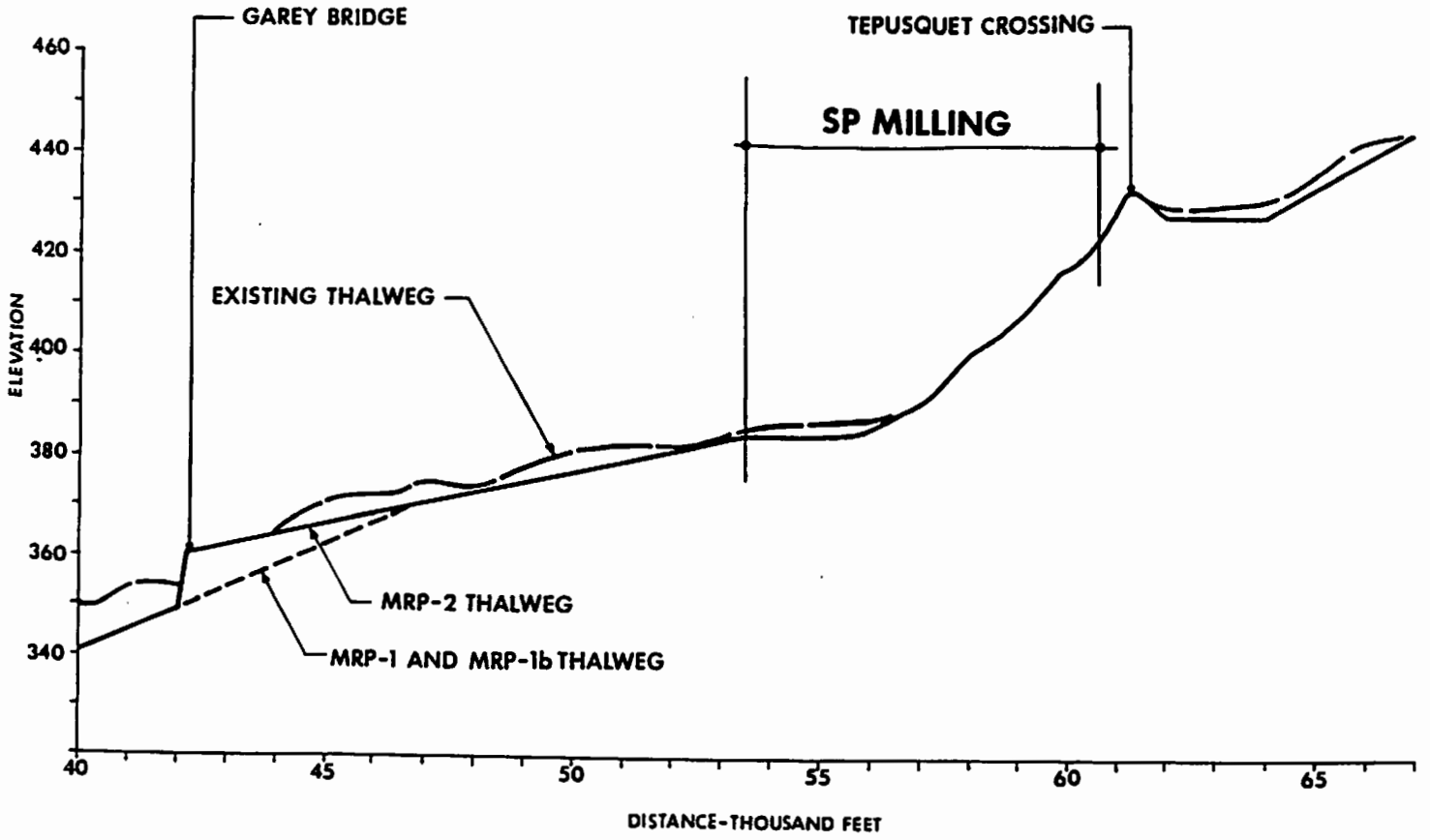


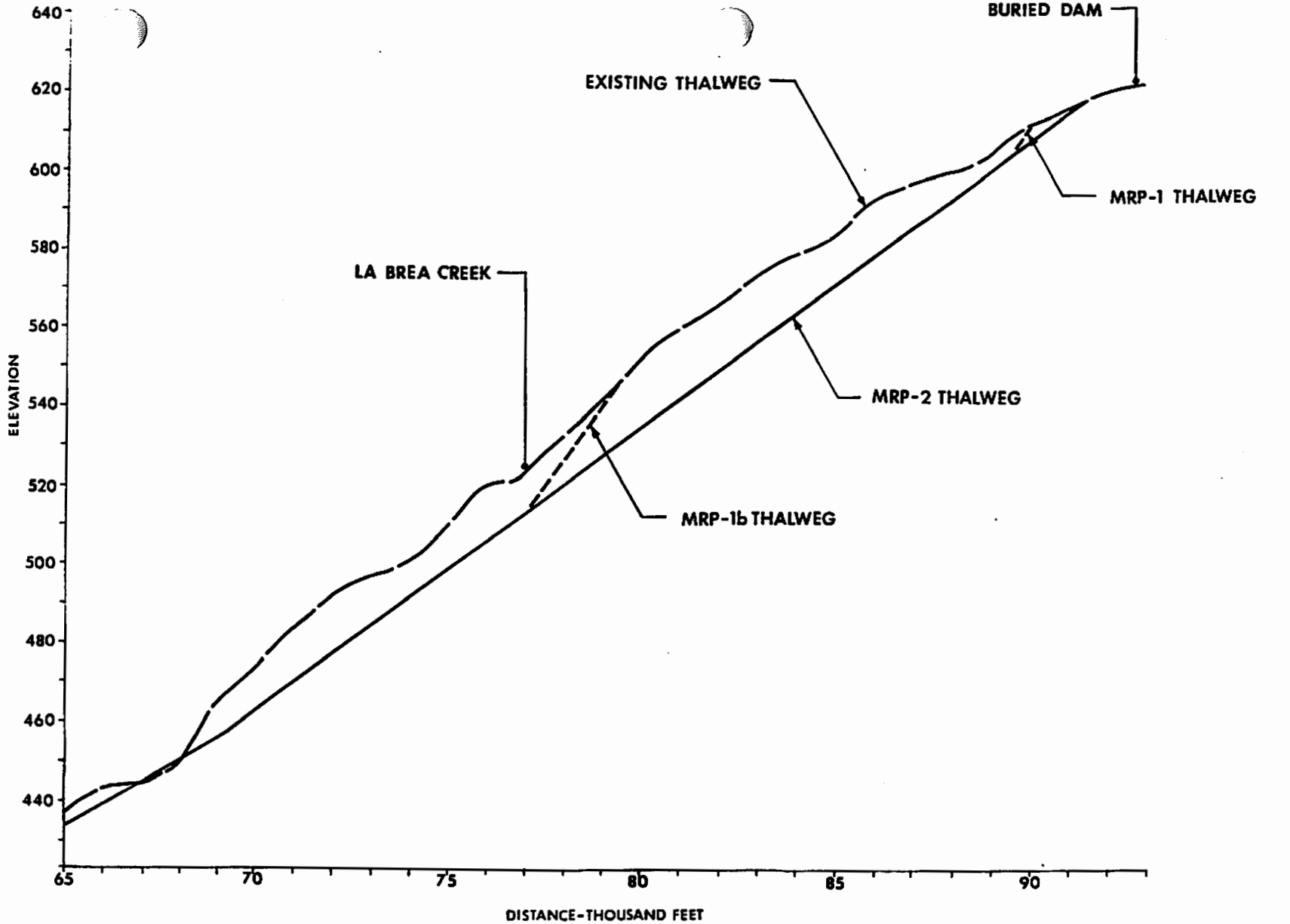
San Luis Obispo County

Santa Barbara County

Figure 6
Lower Reach Thalweg Profile

Santa Maria & Sisquoc River Specific Plan


GAREY BRIDGE
TEPUSQUET CROSSING
SP MILLING
EXISTING THALWEG
MRP-2 THALWEG
MRP-1 AND MRP-1b THALWEG
ELEVATION
460
440
420
400
380
360
340
40
45
50
55
60
65
DISTANCE-THOUSAND FEET

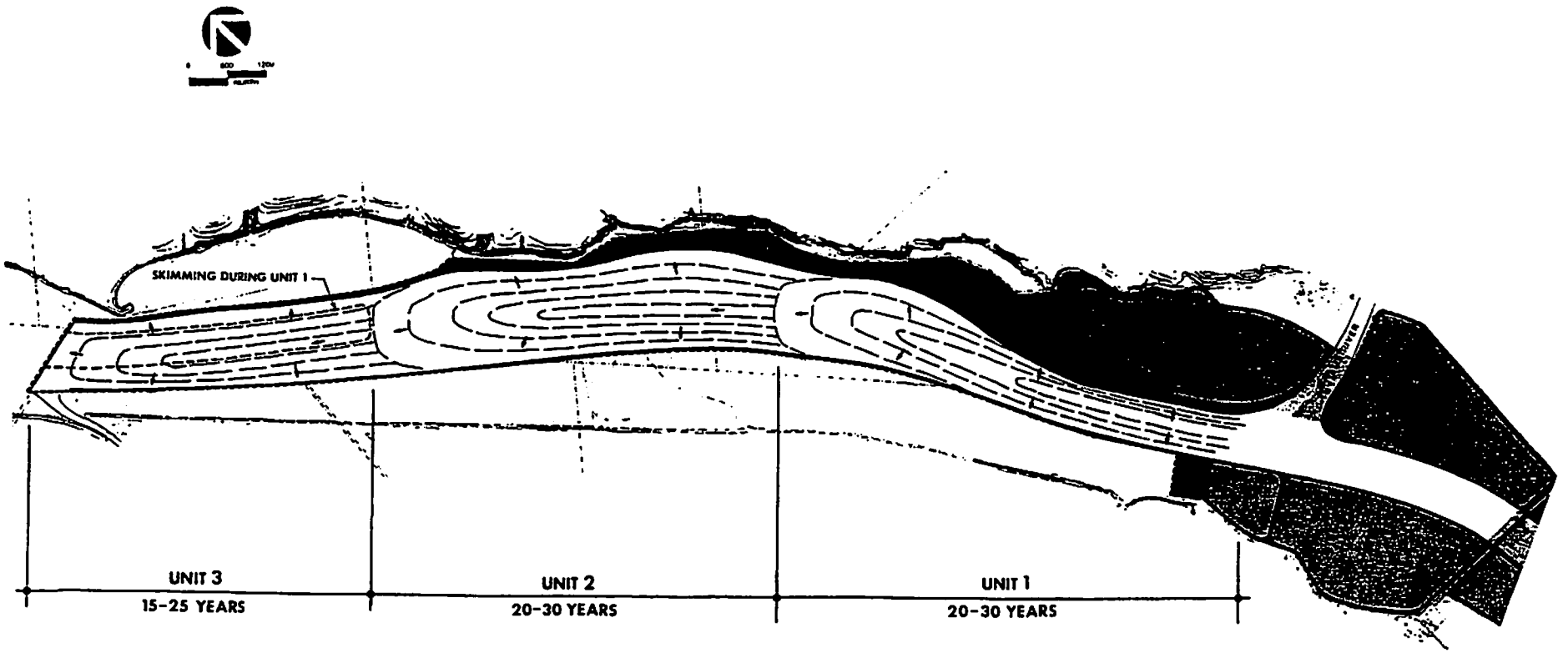


San Luis Obispo County

Santa Barbara County

Figure 8
Upper Reach Thalweg Profile

Santa Maria & Sisquoc River Specific Plan



San Luis Obispo County

Figure 9
Lower Reach Conceptual Mining Plan

Santa Barbara County

Santa Maria & Sisquoc River Specific Plan

No grade control structures, such as check dams, are proposed in the river (the check dam downstream of the existing Garey Bridge is proposed to be removed with completion of the replacement bridge in 1997-1998). If upstream erosion is noted along tributary creeks, a hierarchy of measures to limit erosion is available for consideration through various Plan policies, standards, and the implementing conditions of any subsequent discretionary permits. However, should any in-channel structures prove to be necessary, separate environmental review and permitting is required.

Temporary river crossings associated with mining access roads and haul routes within the riverbed will not be put into place until river flows recede in late spring. Aggregate will not be stockpiled or processed within the floodway of the river. Wash fines from processing aggregate materials are retained on the plant site for use in agricultural land reclamation or other purposes consistent with this Plan.

Riverbed Reclamation: The mulefat scrub habitat in the river bottom will be reclaimed through natural river action. Whenever the river floods, existing vegetation is subject to scour while seeds and branches from existing plants are transported by river flows to be reestablished elsewhere in the river system. Mulefat scrub is known to re-establish rapidly within areas of the river that have been subject to mining (See photographs below). Removal of material in-channel is expected to enhance conditions for restoration of mulefat scrub and other wetland and riparian habitat by reducing the average depth to groundwater within the full cross-section of the channel. Channel banks and levee tops will be revegetated with suitable native vegetation forming a 100-200 foot wide band of native vegetation along both sides of the river. Jurisdictional wetland and willow riparian vegetation affected in and adjacent to the channel will be mitigated by replacement within off-channel detention and inundation basins throughout the project area as described under the discussion of habitat pits below.

An Area of Ongoing In-Channel Mining Upstream from Tepusquet Crossing

Seasonal Marshland within an Active Off-Channel Mining Pit

In-Channel Areas Near Tepusquet Crossing Last Mined Approximately 6 Years Ago

In-Channel Riverbed Reclamation consists of:

- Removing/decompacting any haul roads and temporary river crossings upon completion of mining;
- Establishing finished slopes not to exceed 3:1 for all channel side slopes;
- Revegetating all channel side slopes and levee tops with suitable native vegetation transitioning from riparian to herbaceous scrub to, where groundwater conditions are suitable, native woodland.
- Maintaining all revegetated areas until they are self-sustaining or for five years, whichever is shorter.
- Controlling grazing access to revegetation areas until vegetation is self-sustaining.
- Implementing any necessary measures to prevent tributary erosion subject to separate agency permitting and environmental review.
- Replacing affected jurisdictional wetlands, willow riparian, and woodland habitat in off-channel mitigation sites.
- Ensuring the integrity of the levees between off-channel pits and the river and providing for ongoing maintenance of all levees;
- Ongoing Monitoring to ensure compliance with SMARA performance standards and to ensure that all critical structures within the river are not being adversely affected by ongoing mining operations.

Off-Channel Mining & Reclamation: The plan for the Coast Rock project area also includes an extensive series of off-channel mining areas along both banks of the river primarily along the middle and upper reaches of the project area. The depth of the off-channel mining areas will not exceed the depth of the adjacent river thalweg upon completion of excavation except for certain pits designed to be reclaimed as wetlands. These wetland habitat pits will intentionally be excavated to a depth which will ensure that groundwater is exposed to support the wetland and riparian habitat. Levee tops separating the off-channel pits from the river channel will be a minimum of 50 feet in width with 4:1 side slopes. Mined off-channel areas will be reclaimed to agricultural and wildlife habitat end uses as noted in the Land Use Plan for this project area.

Agricultural pits will be reclaimed with a combination of stockpiled topsoil and wash fines from aggregate processing, supplemented as necessary to provide adequate nutrients. The agricultural pits will be mined and reclaimed in checkerboard fashion with not more than 3 to 4 acres of agricultural land in various stages of excavation and reclamation within any single pit at any given time. Reclamation will be ongoing with excavation to minimize loss of productive agricultural lands. The depth of the pits will range from 15-25 feet with interior 4:1 slopes. Agricultural pits will be graded to provide drainage to perimeter ditches which will connect with on-site retention ponds. Minimum setbacks between top of slope of the levee tops and adjoining property lines and public roads will be

25 feet and 100 feet respectively. Development rights to areas within these pits will be secured by the operator prior to commencement of off channel operations or, alternatively, building sites meeting all applicable County standards will be required to be established upon completion of mining.

Off-Channel Agricultural Pit Reclamation consists of:

- Establishing baseline soil productivity for each pit prior to commencement of mining;
- Backfilling the pits with topsoil and wash fines to achieve an elevation at least 5 feet above the adjacent river thalweg to minimize the potential for groundwater intrusion;
- Providing adequate drainage to the perimeter of each pit to minimize the potential for soil saturation;
- Establishing cover crops with appropriate soil nutrient supplementation;
- Ensuring the integrity of the levees between off-channel pits and the river;
- Addressing future development potential of the pits by either establishing a building site which meets all applicable County requirements or securing the development rights to the pit from the property owner and precluding any future development;
- Minimizing ongoing disturbed areas within agricultural pits so that mining and reclamation activities are incidental to, and do not interfere with agricultural operations.
- Removing all existing processing facilities, structures, waste materials, fuel storage and decompact all soil so that it is suitable for cultivation (Processing Plant Site Only)
- Monitoring to ensure compliance with SMARA performance standards which call for full restoration of pre-mining soil productivity.

Habitat pits will be created in areas where existing wildlife habitat is most prevalent and at or near tributary inflows into the river. These pits will either be designed as inundation basins in direct communication with river flows or as detention basins, separated from river flows by levees. These pits will have at least three terraces separated by 4:1 or flatter slopes to provide for various elevations and moisture conditions for wetland, riparian and herbaceous scrub vegetation. Inundation basins will be designed to allow low velocity flows to enter the basin when the river is flowing bank to bank. The lowest terrace in the inundation basins will be excavated below the depth of the adjacent river thalweg to provide adequate moisture for wetland and riparian vegetation. Detention basins will be similarly designed but will be located at minor tributary outlet points and will also receive moisture from inflows from these tributaries to support wetland and riparian vegetation.

Inundation and detention basins comprise 81.9 acres within the project area. These basins will be linked by wildlife habitat in the river bed and along the banks and levee tops. Portions of the

Hansen/St.Claire pits, located immediately downstream from the SP Milling site, will be vegetated immediately during the first five year mining period to provide advance mitigation for all future jurisdictional wetland and willow riparian habitat that is expected to be directly affected by the project. This mitigation site will be maintained throughout the life of the project to ensure that affected habitat is fully mitigated at a minimum 1.5:1 ratio for replaced wetlands and willow scrub, and 3:1 ratio for replaced riparian willow forest and woodlands.

Off-Channel Habitat Pit Reclamation consists of:

- Establishing baseline conditions and performance criteria to govern the success of revegetation efforts in accordance with SMARA performance standards.

- Establishing internal terraces and pit slopes (not steeper than 4:1) to provide exposure to various groundwater conditions conducive to restoration of wetland, riparian, herbaceous scrub and native woodland habitat.

- Preparing and planting a suitable mix of seed, cuttings and container plantings to achieve plant type and planting density standards based on site specific performance criteria

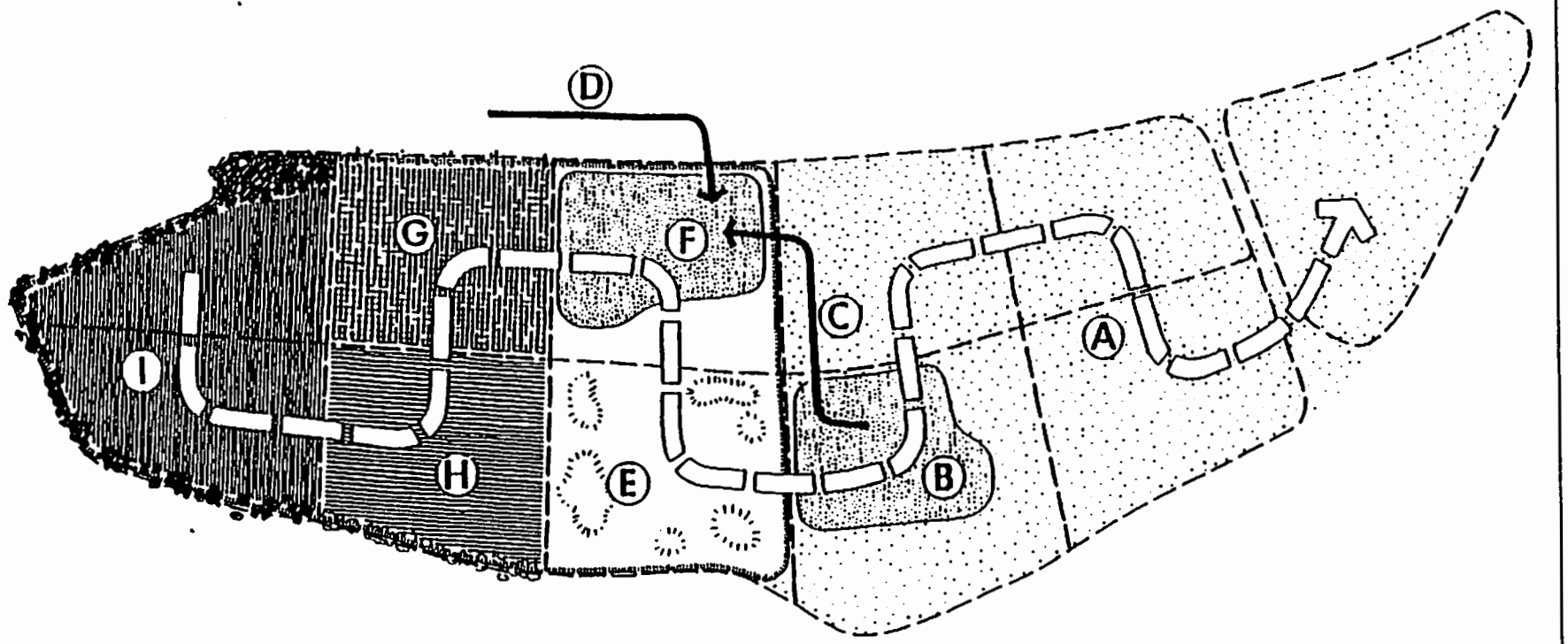
- Maintaining plantings until determined by the County to be self-sustaining. Maintenance could include irrigation, removal of invasive exotic species, rodent control, re-planting, etc. as necessary to ensure that all planted vegetation becomes self-sustaining. Minimum mitigation ratios are required to be maintained on the project site throughout the life of the project.

- Ensuring the integrity of the levees between off-channel pits and the river;

- Providing permanent protection for all revegetated areas;

- Monitoring to ensure compliance with SMARA performance standards which call for full restoration of pre-mining soil productivity within two years of completion of mining.

Phasing of Mining and Reclamation: In-channel mining upstream from the SP Milling site will, as a goal, be completed, in the first 10 years of the project. In-channel mining in the reach upstream from the Garey Bridge to the Kaiser project area will, as a goal, be completed within the first 50 years of the project. In-channel mining in the rest of the project area will be ongoing throughout the life of the project until the ultimate depth and width of the channel is achieved. Off-channel mining will occur primarily in the latter half of the project.



Legend:

- (A) Existing land condition
- (B) Land stripped of overburden/soil prior to excavation
- (C) Transfer of overburden/soil to previously excavated land
- (D) Import of soil to previously excavated land
- (E) Land being actively excavated for aggregate material - 20 acres or less at any time
- (F) Previously excavated land regarded with restored soil and sloped for optimum surface drainage
- (G) Restored land undergoing soil conditioning by growing interim crop after adding organic material - slopes planted with native species for wildlife habitat
- (H) Land returned to agricultural use
- (I) Land fully reclaimed to agricultural productivity

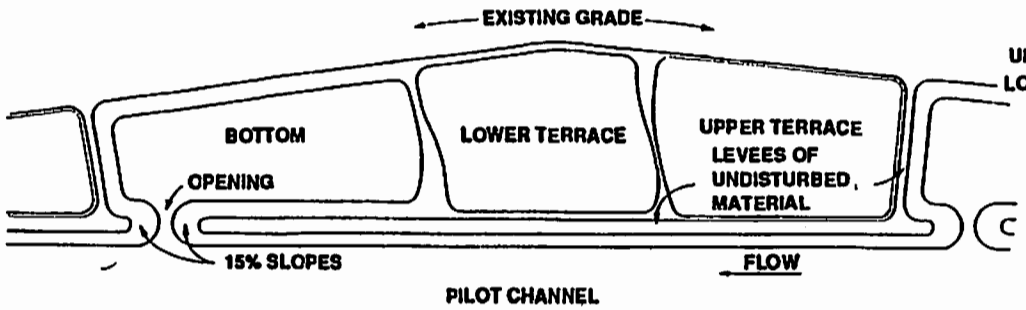
SOURCE: Bissell & Karn.

San Luis Obispo County

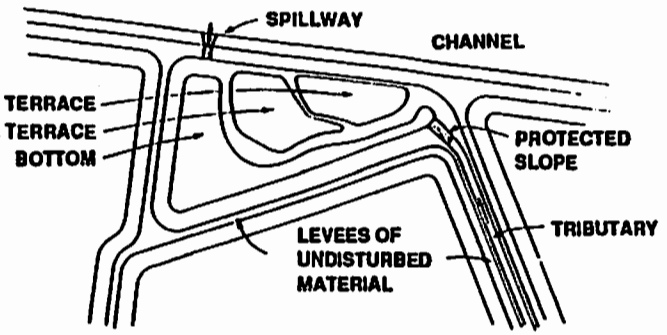
Figure 10
Agricultural Reclamation Plan

Santa Barbara County

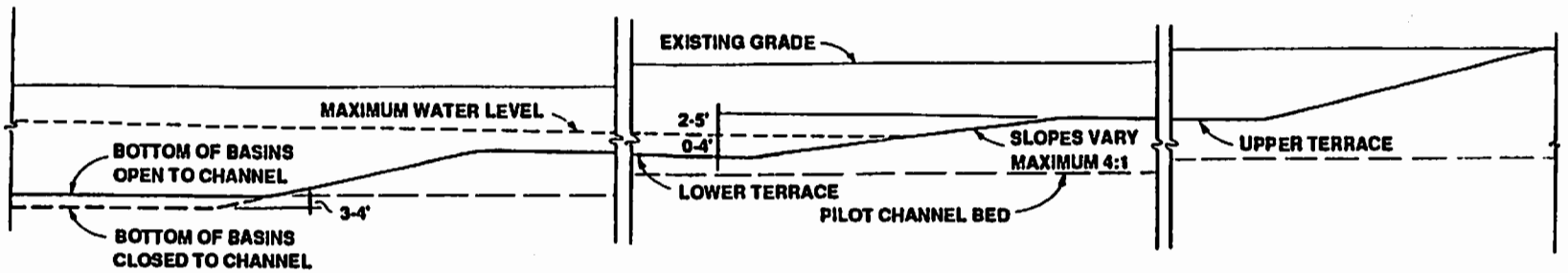
Santa Maria & Sisquoc River Specific Plan



TYPICAL PLAN OF INUNDATION BASIN OPEN TO CHANNEL

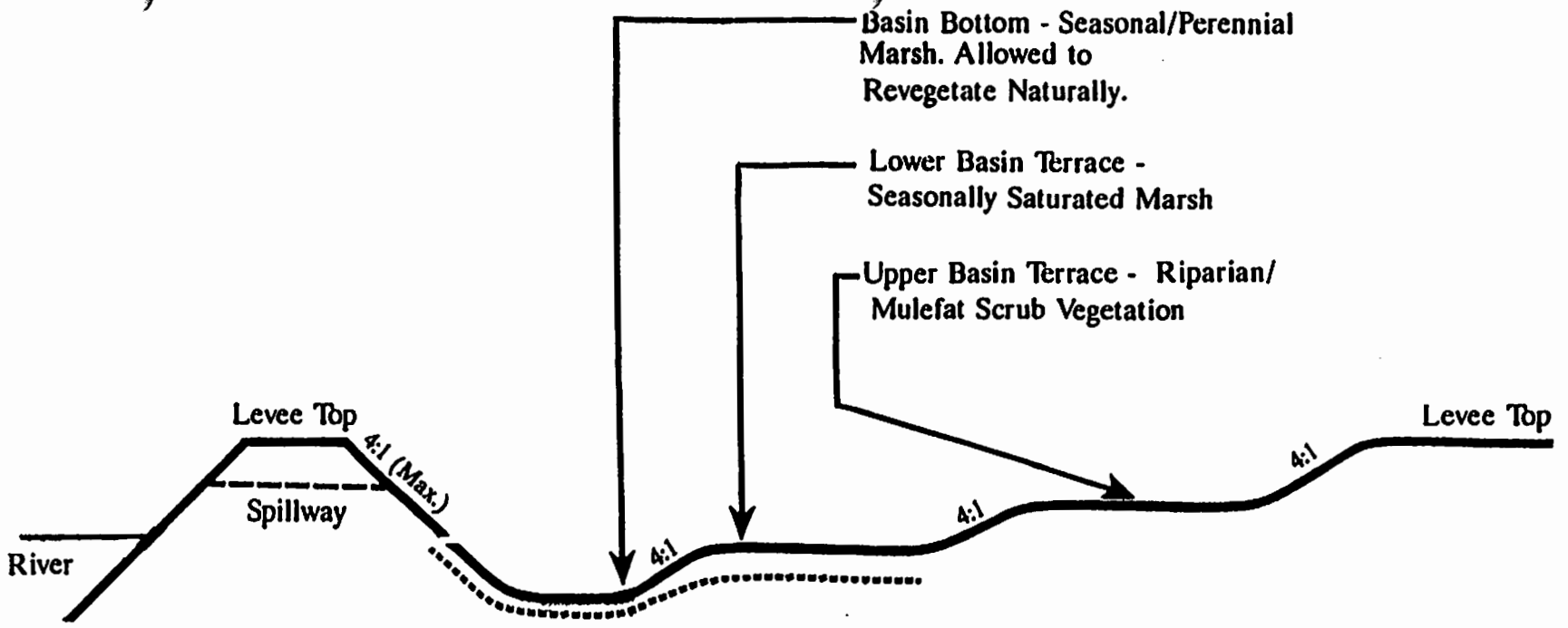


TYPICAL PLAN OF DETENTION BASIN



TYPICAL CROSS SECTION OF BASINS

SOURCE: Bissell & Karn.



San Luis Obispo County

Santa Barbara County

Figure 12
Conceptual Habitat Pit Section

Santa Maria & Sisquoc River Specific Plan

KAISER SAND AND GRAVEL PROJECT AREA

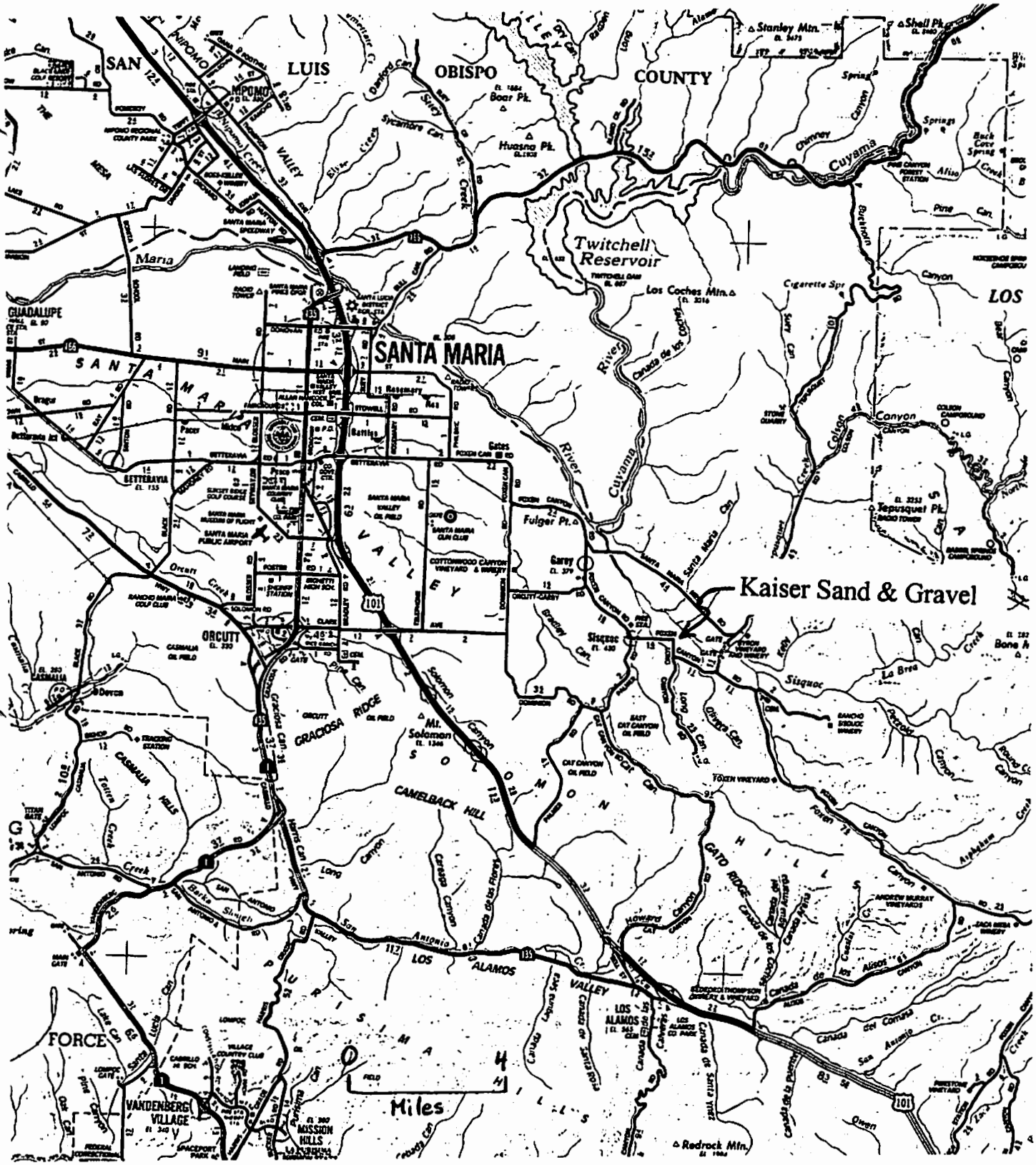
The Kaiser project site is located just east of the town of Sisquoc and adjacent to the Sisquoc River, approximately in the middle of the Specific Plan area. The figures that follow show a close-up view of the project site and illustrate the location of the 1000 foot wide perimeter mining transition area.

Background And Existing Site Features: The project site has been operated as a aggregate extraction and processing facility since the mid 1920s. Historically, mining at this location has been conducted in the riverbed and in pits immediately adjacent to the river channel. Currently, about 289 acres of the site are vested and have approved reclamation plans. Present mining activity occurs primarily in permitted off-channel pits; currently, only limited extraction from the riverbed takes place as a result of hydrologic studies conducted by Kaiser which recommended a maximum depth of excavation (commonly referred to as a "red line" elevation). Processing facilities onsite wash, sort, and stockpile material for onsite sale. Finished products include construction sands and gravels, Portland Cement Concrete (PCC) aggregate, and asphaltic concrete. Existing site features and names of geographic subareas of the site are illustrated on the figures below.

The two parcels which are currently unpermitted and for which Kaiser seeks a permit to mine are known as the Davis and Carranza parcels. These properties are presently in agricultural use and total approximately 70 acres.

Proposed Project Under The Specific Plan: Through this plan, Kaiser will expand its existing off-channel operations on parcels adjacent to its existing facility. The new mining areas are on parcels owned by Kaiser, and will increase the total permitted mining area of the site from the existing 289 acres to 400 acres. These off-channel mining areas are needed in order for Kaiser to maintain its operation at this facility, as material obtained from the river is not in quantities sufficient to sustain it. The two new off-channel pits, along with proposed river channel mining, will provide approximately 23 years of additional operation at the Sisquoc Plant.

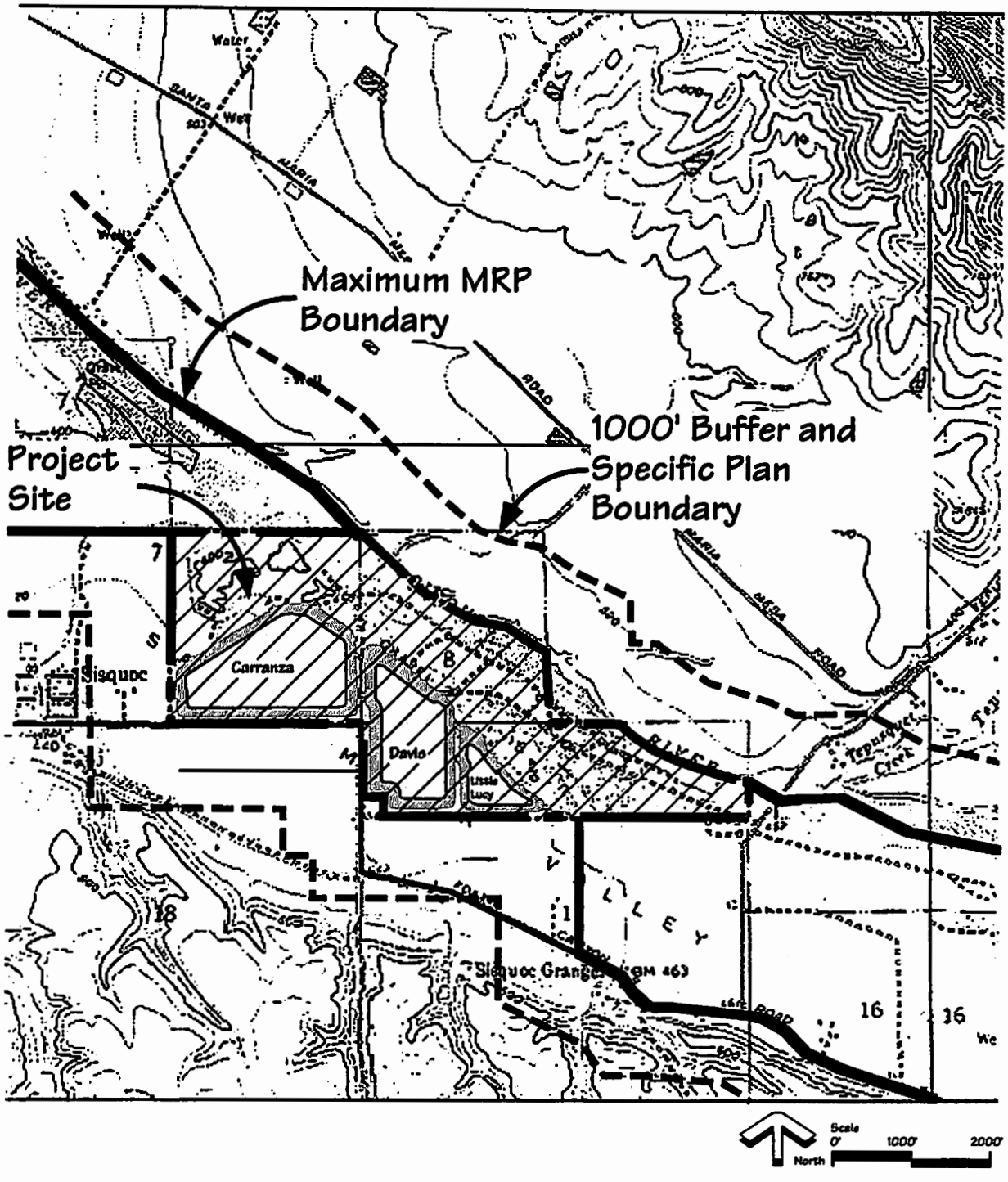
In addition, through this plan, Kaiser is updating the existing approved reclamation plans on its property by consolidating all existing and proposed mining and processing areas into a comprehensive mining and reclamation plan (MRP). The Kaiser MRP divides the site into two primary areas: the river mining and reclamation area and the landward mining and reclamation area.



San Luis Obispo County

Santa Barbara County

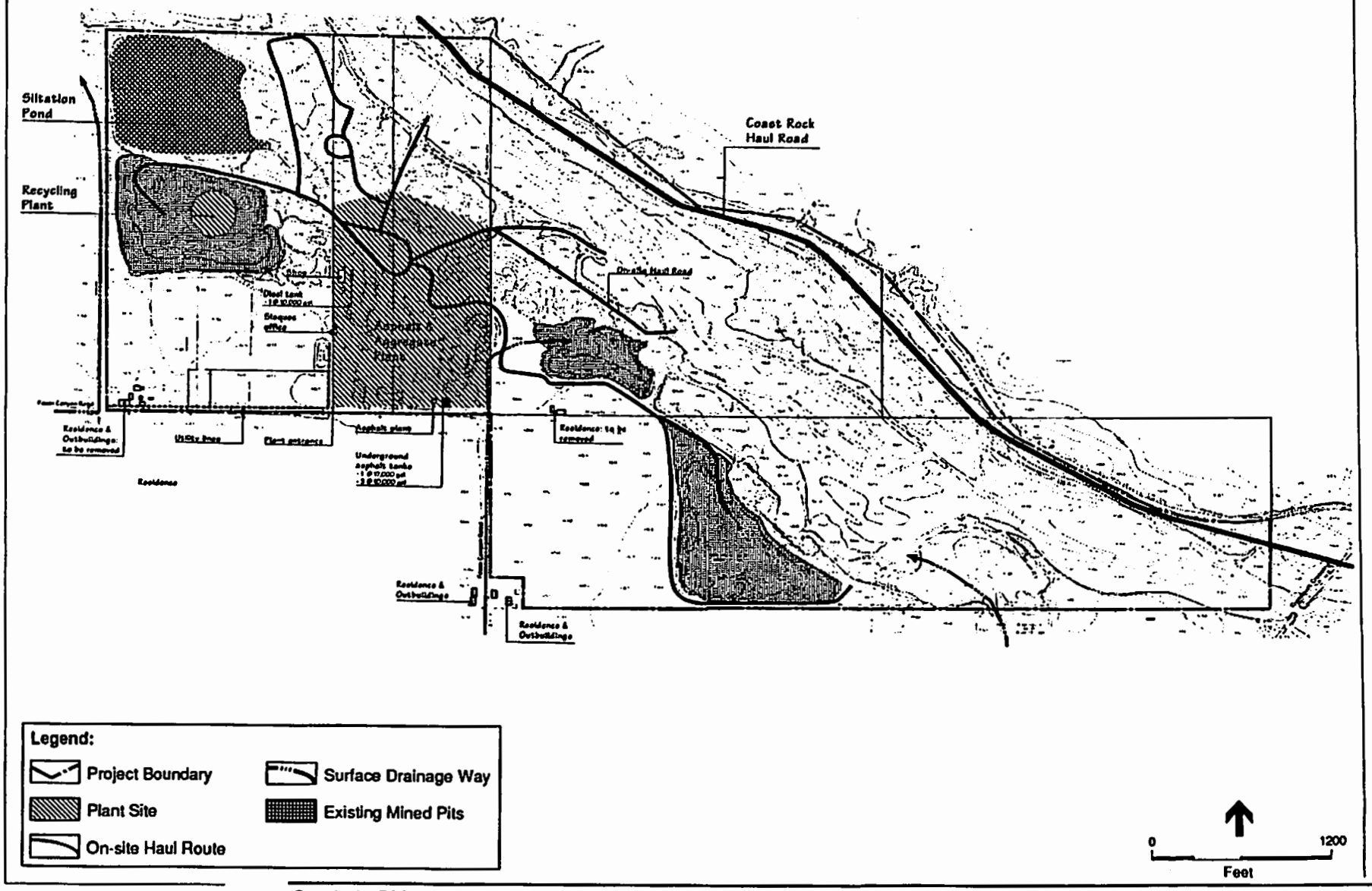
Figure 13
Kaiser Location Map



San Luis Obispo County

Santa Barbara County

Figure 14
Kaiser Specific Plan Map

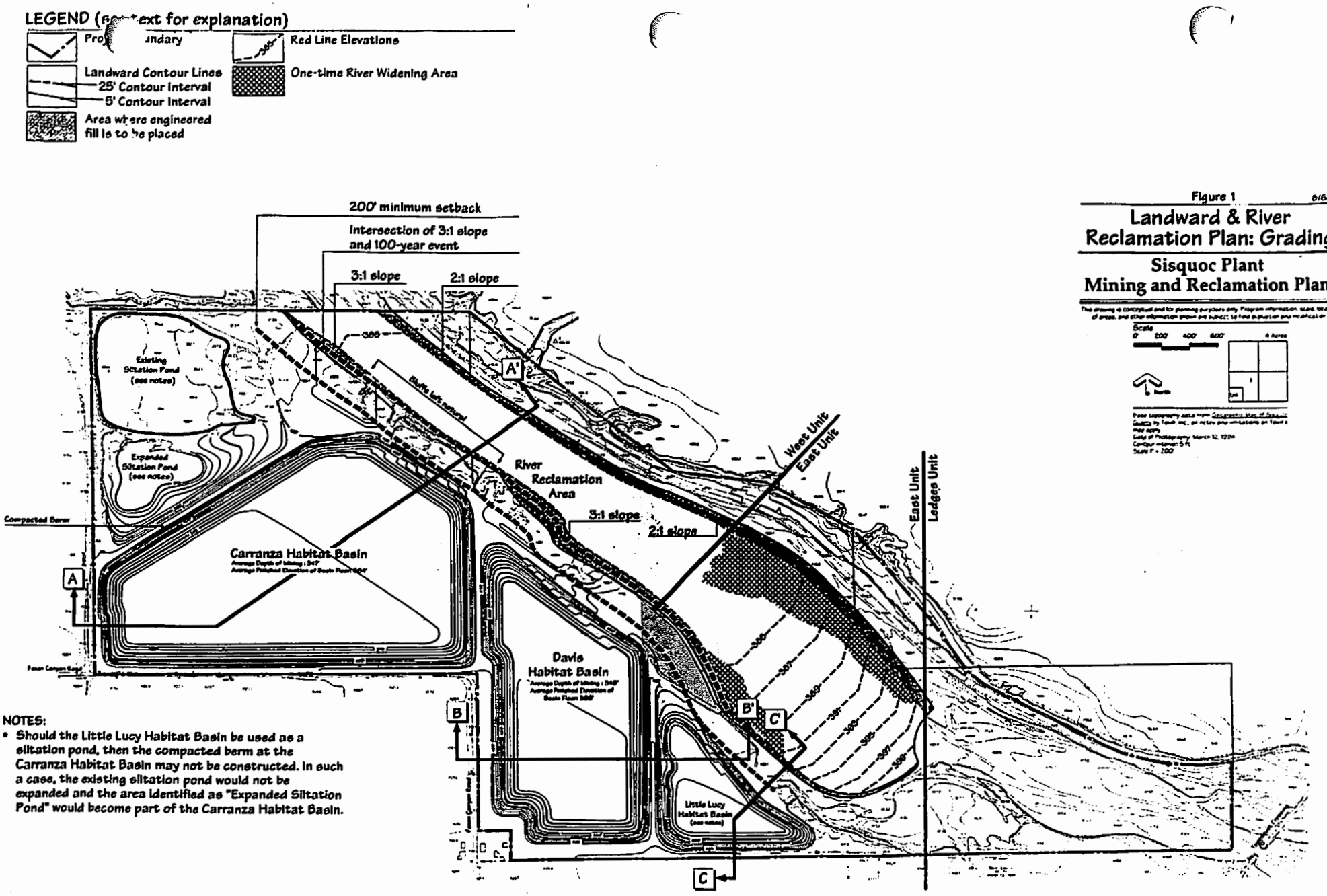


SOURCE: S.P. Milling.

San Luis Obispo County

Figure 15
Kaiser Site Map

Santa Barbara County



San Luis Obispo County

Santa Barbara County

Figure 16
Kaiser Site Features Map

Santa Maria & Sisquoc River Specific Plan

River Mining and Reclamation: The area to be mined in the river channel has been divided into two production units: the East Unit and the West Unit. A third unit, identified as the Ledges Unit, is not planned to be mined because it contains clay ledges which promote channel stability. The Ledges Unit occupies the most upstream portion of the channel on the Kaiser project site.

The East and West units will be mined to redline elevations that were recommended by hydrologic studies completed in August 1994. Limiting excavation to the redline elevation will avoid the creation of "pits" in the river channel which promotes river channel stability. By mining only to the redline elevation, extraction from the channel will be limited to material which is deposited above the redline as a result of major river flows (i.e., extraction will be limited to "replenishment"). It is estimated that this mining activity will yield an average of 100,000 tons per year depending on winter flows. Mining will only occur in dry portions of the river and excavated material (other than excess backfill sand) will not be stockpiled within the channel.

In addition to this "replenishment" mining, approximately 750,000 tons of terrace material will be excavated to redline elevations over a 10± year period. These one-time excavations will add to channel capacity, thereby increasing the capacity of the channel to contain flood flows and promoting bank stability as indicated in the figures below.

Reclamation within the River Area will include establishing 3:1 and 2:1 slopes along the river banks (except where at project termination engineering analysis concludes that banks would be more stable at their natural slopes), and revegetating those slopes with the endemic mule fat scrub plant community. No revegetation is proposed within the active channel itself because of the sparseness of vegetation which occurs naturally and the dynamics of the river (which periodically scours most vegetation during high flows). However, any willow scrub which cannot be avoided during mining of the river channel will be mitigated by establishing willow scrub in off-channel basins, along the finished 3:1 slopes on the southern river bank, or on higher river terraces.

Landward Mining And Reclamation: The landward mining area is divided into the Davis Unit and the Carranza Unit. The Davis and Carranza parcels constitute the proposed expansion areas, most of which are currently unpermitted for mining. The Carranza Unit includes the existing plant site.

Mining in the Davis and Carranza Units will proceed from north to south. Material will be removed with heavy equipment, screened with portable equipment to remove unusable sands (less than 0.25-inch diameter), and then loaded onto trucks or conveyors for transport to the processing plant. Excess sands screened out constitute approximately 40 percent of the volume of raw material removed and will be left in the basins as backfill.

The existing plant site will be mined last after the existing processing plant is dismantled. Material from this site will be processed onsite by using portable equipment.

There will be a 200-foot setback between landward basins and the river, a 50-foot setback between basins, and minimum 50- or 100-foot setbacks between the basins and Foxen Canyon Road.

Drainage improvements will be constructed as needed. Offsite runoff will either drain into the basins or be redirected around the basins and to the river using existing County drainage ditches subject to review and approval by public agencies such as the Regional Water Quality Control Board and the County Flood Control District.

Basins in the Carranza and Davis Units will be mined as described above and concurrently reclaimed to wildlife habitat. Former mining areas, including the Little Lucy basin and existing pits in the Carranza and Davis Units, will also be reclaimed as habitat.

Excess sands will be stockpiled via stacking conveyors and used to backfill the Carranza and Davis basins. Backfill activities will be concurrent with mining throughout the life of the project. The surface of final pit bottoms will be graded to create mounds interspersed with lower areas in order to provide variable surface relief, thereby encouraging establishment of a variety of plant communities and habitats. It is estimated that groundwater will be at or above the pit bottom elevation approximately 30 percent of the time on a variable basis over the long-term. This, in combination with surface precipitation and local runoff, will result in a variable (spatially and through time) habitat complex of locally endemic grassland/meadow, wetland, riparian, and scrub communities. Basin slopes above high groundwater and the berms separating the basins will be seeded as a mulefat scrub association. Portions of the 200-foot setback located between the basins and river that are disturbed by mining will be seeded as a mulefat scrub association. Portions of the site that will not be revegetated include access roads and areas not disturbed by mining.

Slopes of all basins, per County standards, will be 4:1 below high groundwater plus 5 feet, and 2:1 above high groundwater plus 5 feet.

A potential future use of the Carranza, Davis, and Little Lucy basins as groundwater recharge basins is recognized by the Specific Plan and the Kaiser Conditional Use Permit. This use was determined to be infeasible at this time due to a lack of an identified operator and other issues. This potential use is identified as an "optional" reclamation objective if it becomes feasible in the future.

The reclamation plan also includes several elements to address safety and other environmental concerns, such as fencing and landscaping.

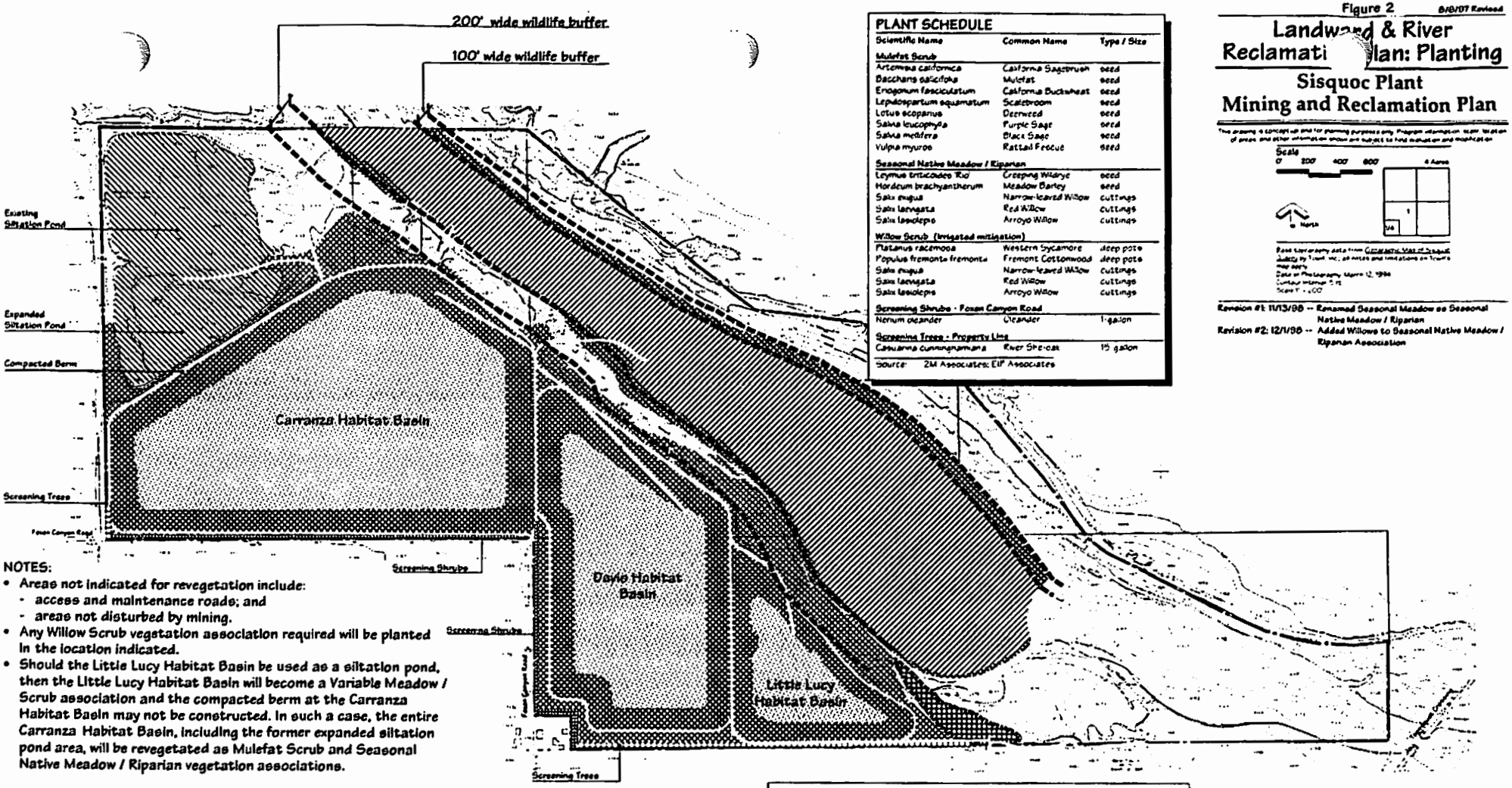


Figure 2 8/8/07 Revised

Landward & River Reclamation Plan: Planting

Sisquoc Plant Mining and Reclamation Plan

Scale 0 200 400 800 1 Inch = 400 Feet

Revision #1: 11/13/98 -- Renamed Seasonal Meadow as Seasonal Native Meadow / Riparian

Revision #2: 12/1/98 -- Added Willows to Seasonal Native Meadow / Riparian Association

PLANT SCHEDULE

Scientific Name	Common Name	Type / Size
Mulefat Scrub		
Artemisia californica	California Sagebrush	seed
Baccharis salicifolia	Mulefat	seed
Eriogonum fasciculatum	California Buckwheat	seed
Lepidospartum squamatum	Scalebroom	seed
Lotus scoparius	Deerweed	seed
Salvia leucophylla	Purple Sage	seed
Salvia mellifera	Black Sage	seed
Vulpia myuros	Rattail Fescue	seed
Seasonal Native Meadow / Riparian		
Leymus triticoides 'Rio'	Creeping Wildrye	seed
Hordeum brachyantherum	Meadow Barley	seed
Salix exigua	Narrow-leaved Willow	cuttings
Salix lasiandra	Red Willow	cuttings
Salix lasiolepis	Arroyo Willow	cuttings
Willow Scrub (irrigated mitigation)		
Platanus racemosa	Western Sycamore	deep pots
Populus fremontii fremontii	Fremont Cottonwood	deep pots
Salix exigua	Narrow-leaved Willow	cuttings
Salix lasiandra	Red Willow	cuttings
Salix lasiolepis	Arroyo Willow	cuttings
Screening Shrubs - Foxen Canyon Road		
Nerium oleander	Oleander	1-gallon
Screening Trees - Property Line		
Casuarina cunninghamiana	River She-oak	15 gallon

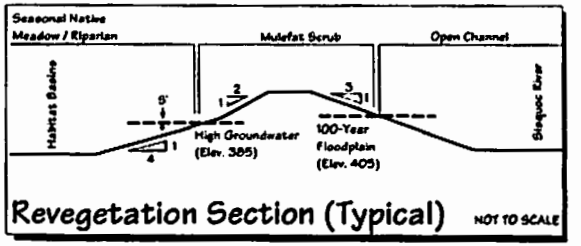
Source: 2M Associates; EIP Associates

NOTES:

- Areas not indicated for revegetation include:
  - access and maintenance roads; and
  - areas not disturbed by mining.
- Any Willow Scrub vegetation association required will be planted in the location indicated.
- Should the Little Lucy Habitat Basin be used as a siltation pond, then the Little Lucy Habitat Basin will become a Variable Meadow / Scrub association and the compacted berm at the Carranza Habitat Basin may not be constructed. In such a case, the entire Carranza Habitat Basin, including the former expanded siltation pond area, will be revegetated as Mulefat Scrub and Seasonal Native Meadow / Riparian vegetation associations.

LEGEND (see text for explanation)

- Project Boundary
- Edge of Wildlife Buffer
- Screening Shrubs
- Screening Trees
- Potential Willow Scrub Mitigation Area
- Mulefat Scrub
- Seasonal Native Meadow / Riparian
- Variable Meadow / Scrub
- Open Channel



Revegetation Section (Typical) NOT TO SCALE

San Luis Obispo County

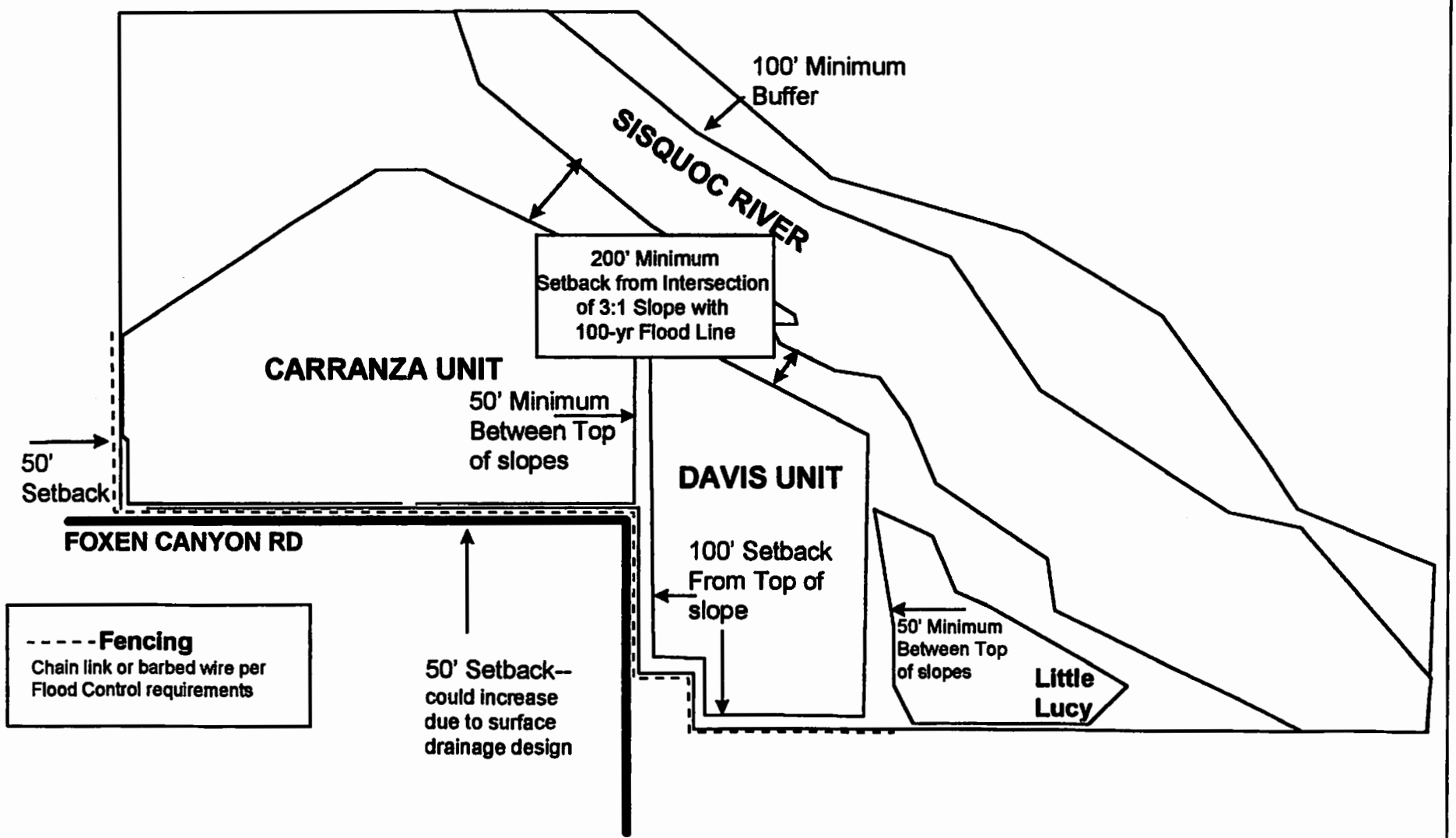
Santa Barbara County

Figure 17
Kaiser Conceptual Planting Plan

Santa Maria & Sisquoc River Specific Plan

Figure 18
Kaiser Setback & Fencing Plan

Santa Maria & Sisquoc River Specific Plan



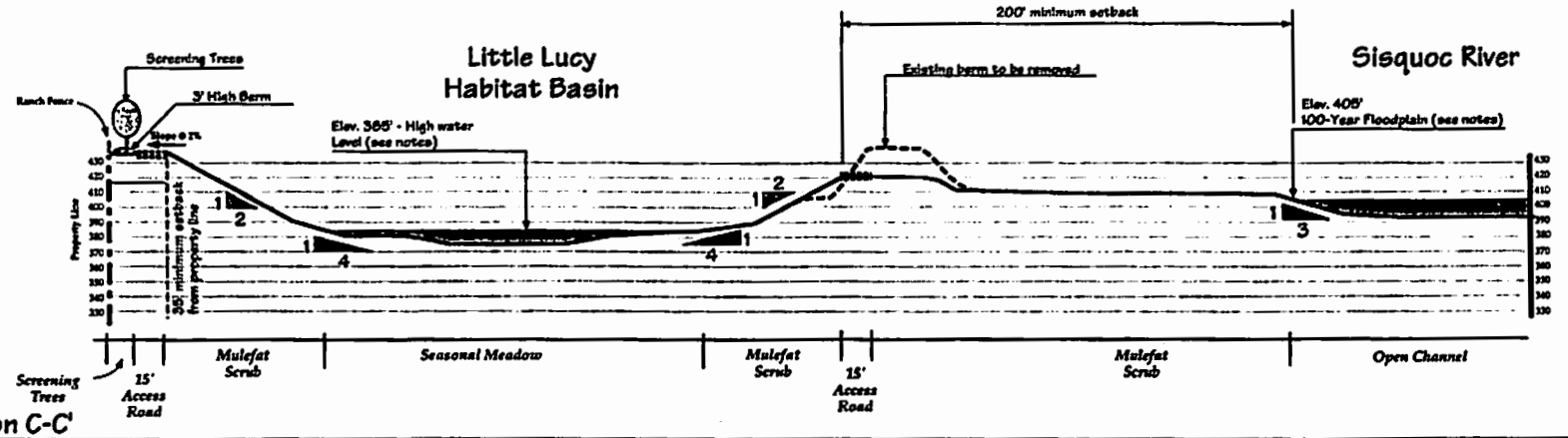
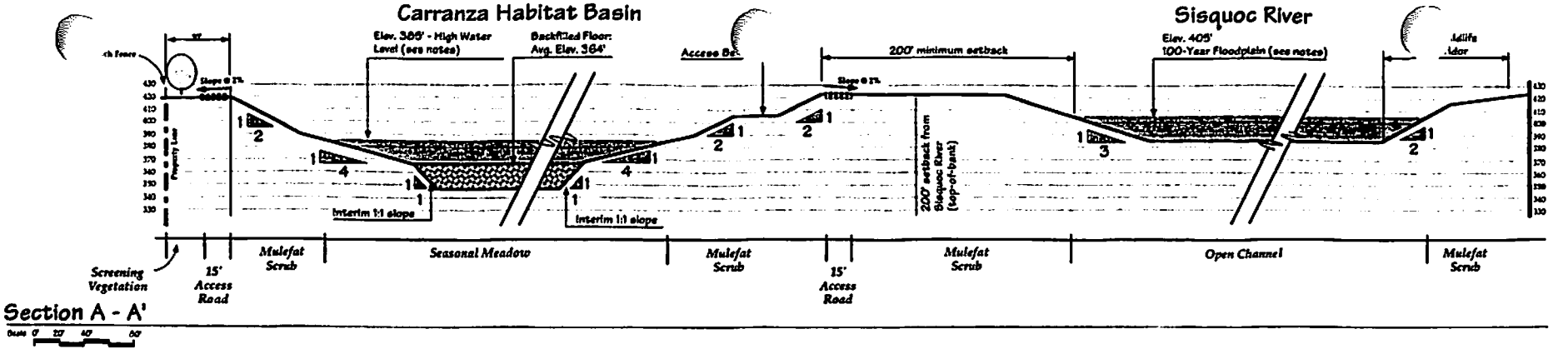


Figure 4
Sheet 2 of 2

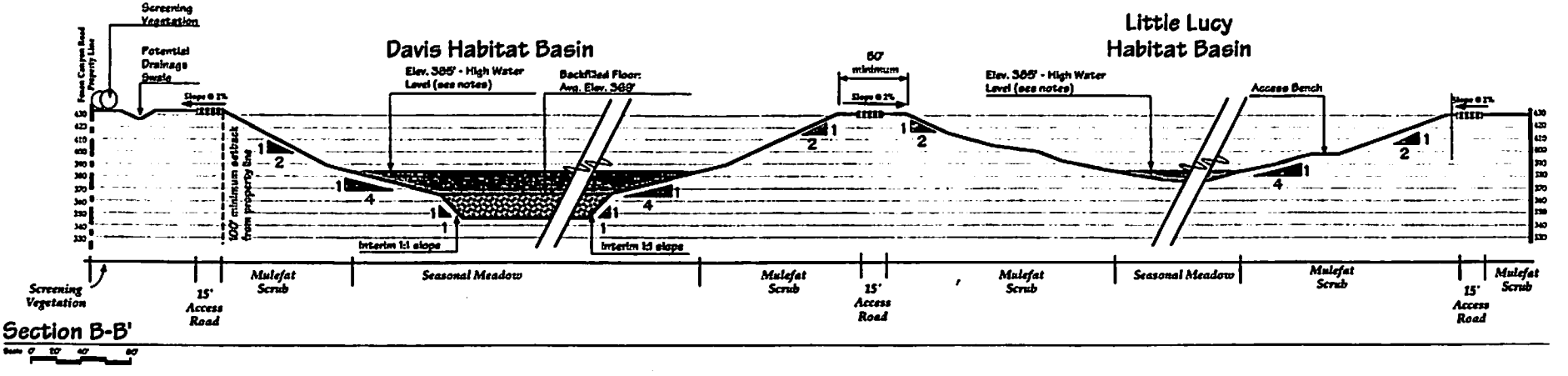
Landward & River Reclamation and Mining Plan: Sections

Sisquoc Plant Mining and Reclamation Plan

Notes:
- See Figure 1: Landward & River Reclamation Plan - Grading for location of section lines
- High water levels per County Geologist; assumes no further regional water table decline
- 100-year floodplain level per Balance Hydrologics HEC 2



Section A - A'



Section B-B'

Notes:
- See Figure 1: Landward & River Reclamation Plan - Grading for location of section lines
- High water levels per County Geologist; assumes no further regional water table decline
- 100-year floodplain level per Balance Hydrologics HEC 2

Figure 4
Sheet 1 of 2

Landward & River Reclamation and Mining Plan: Sections

Sisquoc Plant Mining and Reclamation Plan

San Luis Obispo County

Santa Barbara County

Figure 20
Kaiser Cross Section

Santa Maria & Sisquoc River Specific Plan

ISSUES, PLAN POLICIES AND IMPLEMENTATION STANDARDS

Establishing a framework for the orderly progression of mining with concurrent reclamation is a key goal of this plan. The river ecosystem varies seasonally and is subject to extended droughts as well as intermittent high flows. Consequently a diversity of scrub, riparian and wetland habitats are found in various locations throughout the project area. Dynamic cycles of sediment deposition, scour, erosion, and land inundation contribute to the diversity of successional stage and variety of vegetation within the project site. Conditions range from recently scoured streambed with immature and sparse growth to established zones above the 100-year flood level where mature habitats are present.

Although land forms will be altered to confine river flows within a defined channel, the ultimate site condition within the adjacent to the river channel will generally retain a range of terrain types and river influence similar to what currently exists. There will be a variety of environments ranging from scoured streambed to very infrequently inundated terrace areas. Post-project reclaimed plant communities are intended to be similar to existing conditions. In areas subject to periodic river scour, reclamation will occur through natural succession resulting in a mosaic of riparian, wetland, and alluvial scrub habitat similar to existing conditions. Specially prepared off-channel sites will add opportunities for riparian and wetland habitat diversity (See Chapter VI, Biological Resources, for further details).

Mining and reclamation of off-channel agricultural lands is projected to result in a slight net gain in overall agricultural lands within the Specific Plan area upon completion of reclamation. Agricultural land reclamation will take place in strict conformity with all applicable SMARA performance standards, as well as the policies and standards in this plan and the conditions in any implementing discretionary permits with strict limits on the amount of agricultural land that can be disturbed by mining at any given time (See Chapter VII, Agricultural Resources, for further details).

As proposed in this Specific Plan, reclamation will be a continuous activity which will be an integral part of the extraction process. Through the combined process of mining and reclamation, the project is designed to provide significant benefits to the project area, including: a stable and controlled river system for protection of agricultural lands, populated areas, the existing flood control levees, and the Garey Bridge; reclaimed and enhanced agricultural land; enhanced native vegetation and enriched wildlife habitat.

It is not the purpose of this Specific Plan to establish all of the standards for mining and reclamation. Individual mining and reclamation plans should specify more detailed and exact standards, consistent with the policies presented herein. If a case arises where a policy or standard presented herein conflicts with other existing regulations or policies, the Specific Plan standards shall take precedence. Additional requirements for inspections, permitting, financial assurance, and monitoring are presented in Chapter XI (Implementation).

The following policies and standards provide the basic framework for mining and reclamation in the Plan area. These policies and standards are intended to implement the goals of the Specific Plan and reduce any potential adverse impacts generated by mineral extraction within the project area. Each operator applying for approval of a mining and reclamation plan must adhere to and be in conformance with these standards.

Policy Reclamation-I (Concurrent Reclamation): Implement reclamation activities concurrently with mining operations to the maximum extent feasible.

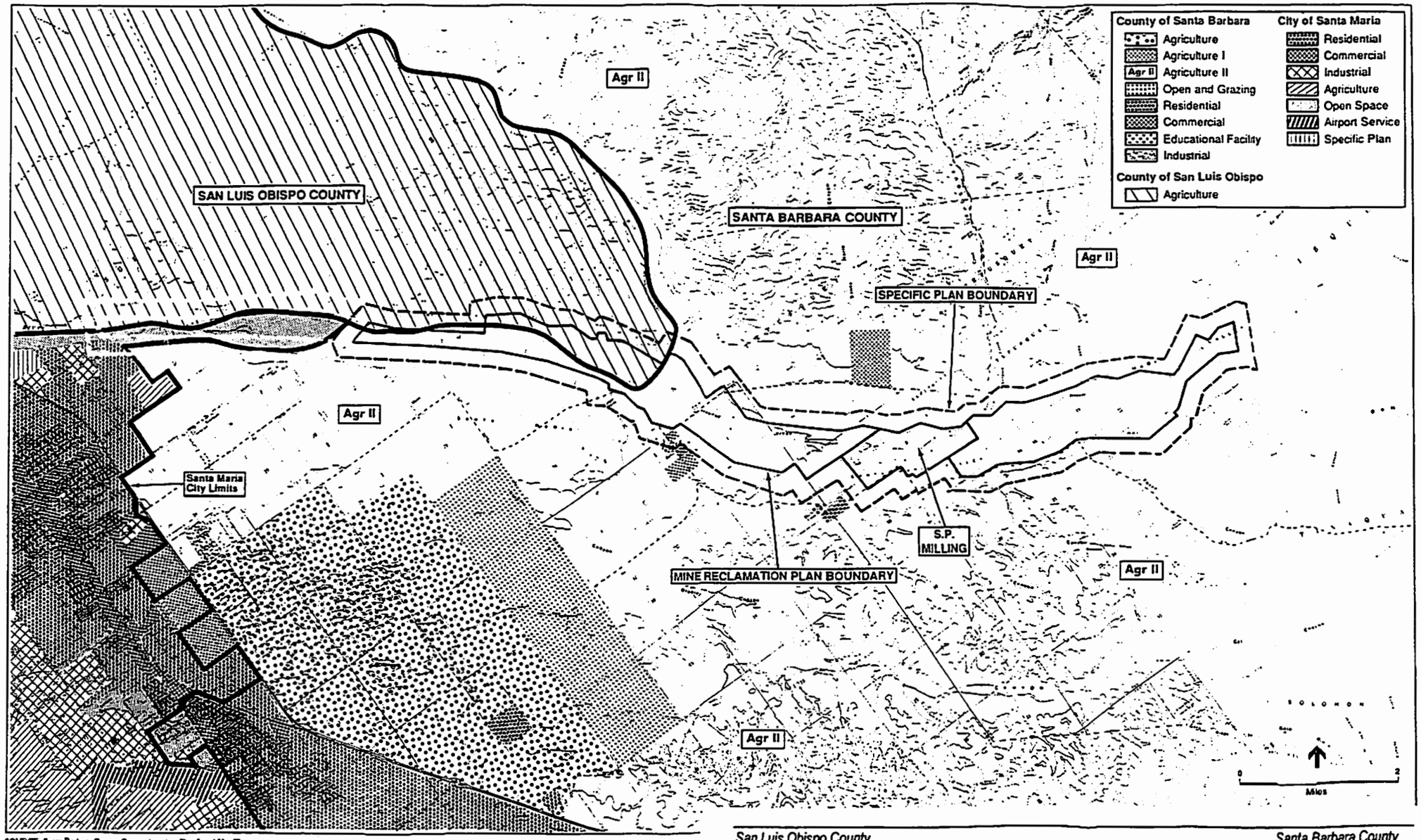
Policy Reclamation-II (Periodic Review): Require preparation and submittal of detailed mining and reclamation implementation plans for agency review and approval at least every five years for in-channel mining operations and at least every 10 years for off-channel mining operations..

Implementation Standards and Plan Requirements:

1) ***Periodic Mining Plan Elements***: Each periodic mining and reclamation plan shall include the following elements for the upcoming mining period:

   a) Grading Plan (Existing, Proposed and Ultimate Topography)
   b) Cross Sections (Existing, Proposed and Ultimate Topography)
   c) Drainage Plan (for Off-Channel Areas, as applicable)
   d) Reclamation Implementation Plan (for areas proposed to be mined in the upcoming mining period)
   e) Progress Report on Reclamation Activities to Date
   f) Any Special Resource Studies as required by the County

Policy Reclamation-III (Mining/Reclamation Sequence): The sequence of mining and reclamation for the Coast Rock project shall be in substantial conformity with the illustrative figures included in this plan, subject to renewal of the conditional use permit and reclamation plan governing surface mining operations for each phase.

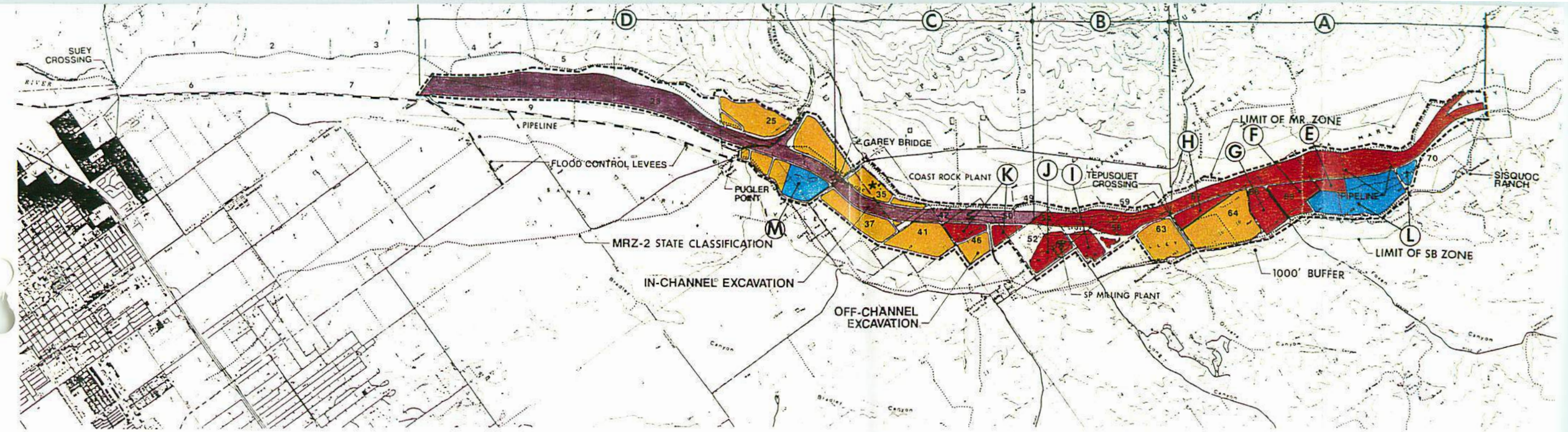


SOURCE: Santa Barbara County Comprehensive Plan Land Use Element,
Land Use Policy Map for the City of Santa Maria,
San Luis Obispo County General Plan Land Use Element.

San Luis Obispo County — *Santa Barbara County*

Figure 5
General Plan Land Use

Santa Maria & Sisquoc River Specific Plan



PHASING OF MINING

PHASE	TYPE	COLOR KEY	AREA	TIME PERIOD FOR MINING
1	IN-CHANNEL		A	10 YEARS FROM PHASE 1 PERMIT INITIATION
			B	15 YEARS FROM PHASE 1 PERMIT INITIATION
			C	15 YEARS FROM PHASE 1 PERMIT INITIATION
			D	25 YEARS FROM PHASE 1 PERMIT INITIATION
	OFF-CHANNEL		E	25 YEARS FROM PHASE 1 PERMIT INITIATION
			F	25 YEARS FROM PHASE 1 PERMIT INITIATION
			G	25 YEARS FROM PHASE 1 PERMIT INITIATION
			H	25 YEARS FROM PHASE 1 PERMIT INITIATION
			I	10 YEARS FROM PERMIT INITIATION
			J	25 YEARS FROM PERMIT INITIATION
			K	RECLAIMED UPON PHASE 1 PERMIT INITIATION
2	IN-CHANNEL		C	25 YEARS FROM PHASE 2 PERMIT INITIATION
			D	25 YEARS FROM PHASE 2 PERMIT INITIATION
	OFF-CHANNEL		L	25 YEARS FROM PHASE 2 PERMIT INITIATION
			M	25 YEARS FROM PHASE 2 PERMIT INITIATION
3	IN-CHANNEL		D	15-20 YEARS FROM PHASE 3 PERMIT INITIATION
	OFF-CHANNEL		ALL REMAINING OFF-CHANNEL PITS	15-20 YEARS FROM PHASE 3 PERMIT INITIATION

San Luis Obispo County

Figure 21
Kaiser & Coast Rock Mining Sequence

Santa Barbara County

Santa Maria & Sisquoc River Specific Plan

Phasing Program for Coast Rock Project Area Mining
Table 1

Project Phase	*Location of Mining*	*Time Period for Mining*	*Target Date for Completion of Mining (1)*
Phase I In-Channel	Upstream from Tepusquet Crossing (Area A)	10 Years from Phase I Permit Initiation	10 Years from Phase I Permit Initiation
	Garey Bridge to Kaiser Sand and Gravel (Areas B&C)	25 Years from Phase I Permit Initiation	50 Years from Phase I Permit Initiation
	Downstream from Garey Bridge (Area D)	25 Years from Phase I Permit Initiation	64 Years from Phase I Permit Initiation
Phase I Off-Channel	Travis, Portion of Bognuda and Sisquoc Ranch Pits (Areas E-H, K)	25 Years from Phase I Permit Initiation	25 Years from Phase I Permit Initiation
Phase II In-Channel	Downstream from Garey Bridge (Area D)	25 Years from Phase II Permit Initiation (Santa Barbara County only)	39 Years from Phase II Permit Initiation
	Garey Bridge to Kaiser Sand and Gravel (Area C)	25 Years from Phase II Permit Initiation	25 Years from Phase II Permit Initiation
Phase II Off-Channel	Sisquoc Ranch Pits, Portion of Bognuda Pit, and Adam Pit (Areas L&M)	25 Years from Phase II Permit Initiation	25 Years from Phase II Permit Initiation
Phase III In-Channel	Downstream from Garey Bridge (Area D)	To be Determined by County Planning Commission	15-20 Years from Phase III Permit Initiation
Phase III Off-Channel	All Remaining Off-Channel Pits.	To be Determined by County Planning Commission	15-20 Years from Phase III Permit Initiation

Note (1): At the time of ten year review by the Planning Commission, additional time to complete mining in the area may be granted if diligent progress toward completion of mining in this area has been made.

Policy Reclamation-IV (Mining/Reclamation Sequence): The sequence of mining and reclamation for the Kaiser Sand and Gravel project shall be in substantial conformity with the Tables and Figures below:

Note: The proposed phasing for mining and reclamation is summarized below. The timing identified is an estimate and will vary depending on sales demand, rock versus sand demand, and other factors. Annual extraction is estimated to range between 400,000-900,000 tons. Landward mining will begin in the Davis Unit (phase 1), then proceed to the portion of the Carranza Unit not occupied by the existing plant site (phase 2). The last steps in the mining process include removal of the rock and sand plant and mining reserves beneath the plant site using portable equipment (phase 3). The asphalt plant will then be removed and underlying reserves mined using the portable equipment. Phase boundaries are shown on the figures below. As phase 2 is excavated to elevation 347', the plant site at existing elevation 428' (excluding stockpiles) will be separated from the phase 2 mined area by temporary 1:1 slopes (maximum). During phase 3, the temporary 1:1 slopes will be removed.

Kaiser Sand and Gravel Phasing Program for Landward Mining Areas
Table 2

Phase I

Years 1-3
1) Haul agricultural topsoil from area to be mined within Davis Unit to Coast Rock or use topsoil for onsite reclamation activities.
2) Mine portion of Davis Unit.
3) Stockpile/backfill fines for use in reclaiming Davis Unit as mining progresses.
4) Initiate excavation of hill between Little Lucy basin and river to above 100-year flood elevation.
5) Initiate construction and revegetation of final slope along northeast side of Little Lucy basin.
6) Revegetate completed slopes and backfilled area in Davis pit.
7) Install drainage improvements as determined in Periodic MRP review process.
8) Review need for hard bank or equivalent protection, and engineered fill as required by CUP.
9) Plant oleanders and trees for screening purposes along Foxen Canyon frontage, portion of westerly and southerly boundaries of site, and between Davis Unit and residence.
10) Install 3' high dirt berm between Little Lucy basin and southerly property line.
11) Install warning bumpers on Foxen Canyon Road.

Years 4-6
1) Haul agricultural topsoil from area to be mined within Davis Unit to Coast Rock or use topsoil for onsite reclamation activities.
2) Continue to mine and reclaim portion of Davis Unit.
3) Stockpile/backfill fines for use in reclaiming Davis Unit as mining progresses.
4) Complete excavation of hill between Little Lucy basin and river to above 100-year flood elevation.
5) Complete construction and revegetation of final slope along northeast side of Little Lucy basin.
6) Initiate construction and revegetation of final slope along west side of Little Lucy basin.
7) Revegetate completed slopes and backfilled area in Davis pit.
8) Install drainage improvements as determined in Periodic MRP review process.

Years 7-9
1) Haul agricultural topsoil from area to be mined within Davis Unit to Coast Rock or use topsoil for onsite reclamation activities.
2) Complete mining of Davis Unit.
3) Stockpile/backfill fines for use in reclaiming Davis Unit as mining progresses.
4) Complete construction and revegetation of final slope along west side of Little Lucy basin.
5) Initiate construction and revegetation of final slope along south side of Little Lucy basin.
6) Revegetate completed slopes and backfilled area in Davis pit.
7) Install drainage improvements as determined in Periodic MRP review process.

Phase II

Years 10-13

1) Haul agricultural topsoil from area to be mined wilhin Carranza Unit to Coast Rock or use topsoil for onsite reclamation activities.
2) Mine all of Carranza Unit except plant site.
3) Stockpile/backfill fines for use in reclaiming Davis and Carranza Units as mining progresses.
4) Complete backfill and revegetation of Davis basin.
5) Complele construction and revegetation of final slope along south side of Little Lucy basin (by year 10).
6) Revegetate completed slopes and backfilled area in Carranza pit.
7) Install drainage improvements as determined in Periodic MRP review process.

Phase III

Years 14-23

1) Mine remainder of Carranza Unit (plant site).
2) Stockpile/backfill fines for use in reclaiming Carranza basin as mining progresses.
3) Complete backfill and revegetation of Carranza basin.
4) Install drainage improvements as determined in Periodic MRP review process.
5) Remove rock and sand processing plant in year 14 and replace with a portable rock and sand plant.
6) Remove portable rock and sand plant and asphalt plant at end of mining.
7) Complete revegetation of remaining dislurbed areas in landward mining area.

Table 3 - Landward Mining

	Mine Phase	Acres	Gross Reserves	Max. Depth of Excavation	Backfilled Elevation of Basin Floor	Final Slope Gradient
Davis Pit	1	50[1]		Elev 348'	Elev 369'	4:1&2:1[2]
Carranza Pit w/o Plant Site	2	72[1]		Elev 347'	Elev 364'	4:1&2:1[2]
Carranza Pit Plant Site	3	25	_____	Elev 347'	Elev 364'	4:1&2:1[2]
TOTAL		14.7 million Tons[3]				

[1] Acreages shown are for completed basins. Portions of the 50 and 72-acres already have been mined.

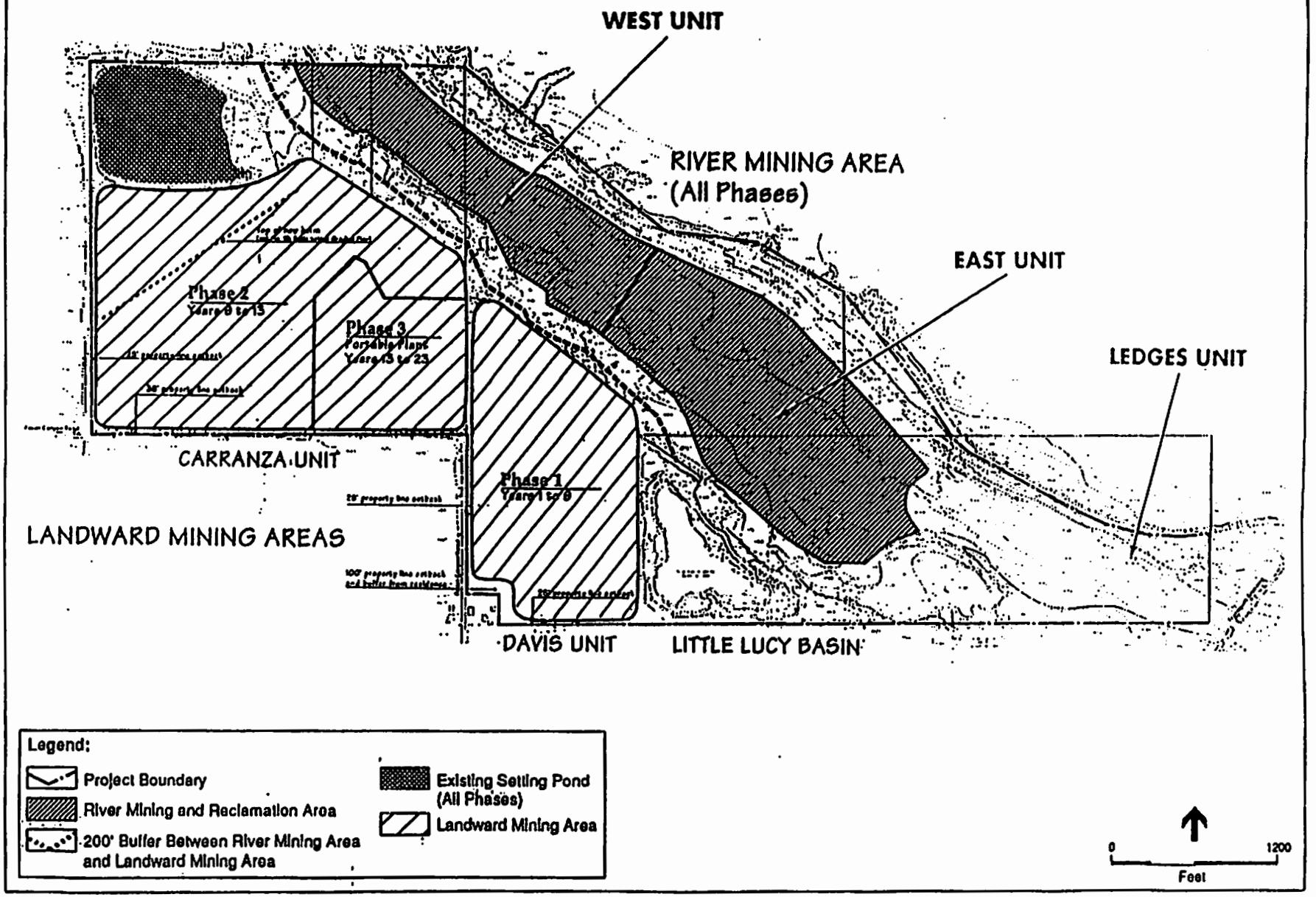
[2] 4:1 slope below elevation 390' and 2:1 slope above elevation 390'. Elevation 390' is 5' above the high groundwater elevation of elevation 385'.

[4] Actual salable product will be a portion of the extracted material, and will average approximately 60% of extracted material (8.8 million tons).

Table 4 - River Mining

	Acres	Redline Elevation	Annual Average Production	Slope Final Gradient
West Unit	41.3	Elev 385'	37,500 tons/yr	North bank- 2:1 South bank- 3:1
East Unit	46.5	Elev 385'-399'	62,500 tons/yr	North bank- 2:1 South bank- 3:1

_Note: Final slope gradient for the South bank of the West Unit may be steeper than 3:1 subject to conformance with the criteria included in project conditions.



SOURCE: S.P. Milling.

San Luis Obispo County

Figure 22
Kaiser Phasing Plan

Santa Barbara County

Policy Reclamation-V (End Use): Reclaimed lands shall have the end uses specified in the master mining and reclamation plan and summarized in the tables below. Land use acreages are approximate and shall be reviewed throughout the life of the project for substantial conformity with the tables below:

TABLE 5

SUMMARY OF PROPOSED POST-RECLAMATION LAND USE
(Coast Rock Project Area)

Land Use	Santa Barbara County Acres	San Luis Obispo Co Acres	Total	% of Plan Area
Agriculture	1,115.6	90.9	1,206.5	38.4
Wildlife Habitat				
Inundation Basins	66.0	5.4	71.4	2.3
Detention Basins	10.5	---	10.5	.3
Channel Side Slopes	103.1	30.1	133.2	4.2
Pit Slopes	189.4	20.1	209.5	6.7
Terrace & Levee Tops	342.6	141.4	484.0	15.4
Groundwater Recharge	0	0	0	0
Channel	656.3	366.8	1,023.1	32.6
TOTAL	**2,483.5**	**654.7**	**3,138.2**	**100**

TABLE 6

SUMMARY OF PROPOSED POST-RECLAMATION LAND USE
(Kaiser Sand and Gravel Project Area)

Land Use	Acreage	% of Plan Area
Agriculture	0	0
Groundwater Recharge	0	0
Wildlife Habitat		
Channel (In and Adjacent)		
Riparian	2.2	<1
Mulefat Scrub	8.0	2.0
Open Channel	80.3	20.0
Wildlife Habitat		
Off-Channel (Pits, Slopes, Silt Pond)		
Riparian/Mulefat Scrub Meadow	199.2	49.8
Undisturbed	110.2	27.6
TOTAL	**400**	**100.0**

Policy Reclamation-VI (Reclamation Coordination): Coordination of reclamation activities between mining operators within the plan area, as well as with off-site mining operations, is encouraged if such coordination can avoid or reduce adverse environmental effects. Such activities can include, but are not limited to: Participation in regional mitigation banking programs; acceptance of suitable mine waste from off-site operators that will not cause adverse environmental impacts within the project area as a means of raising final pit elevations; sharing of topsoil for use in agricultural land reclamation.

Implementation Standards and Plan Requirements:

See Agricultural and Biological Resources Chapters.

Policy Reclamation-VII (Public Health and Safety): Mining and reclamation operations shall be conducted in a manner which prevents and/or eliminates any hazards to the public health and safety during mining and upon completion of reclamation.

Implementation Standards and Plan Requirements:

1) ***Pipeline Operator Notification***: Pipeline operators shall be notified prior to excavations within 200 feet of affected pipelines. Coast Rock shall provide pipeline operators annual mining and monitoring reports describing the previous year's excavations and the planned operations for areas within 200 feet of any pipeline during the term of the next Periodic MRP. These reports shall also be submitted with the annual mining/monitoring report to the County of Santa Barbara.

2) ***Leak Inspections***: To reduce impacts from spillage of petroleum products, the operators shall inspect roads, equipment and trucks daily for leakage and take corrective action to eliminate any leakage discovered immediately

3) ***Safety:*** To protect public safety, the operators shall berm or fence (with warning signs in either case) any detention basins/inundation basins or other areas of ponded water in conformance with County Flood Control District standards. Completed pits and slopes shall be designed and developed in accordance with all applicable SMARA requirements, including Section 3704 (Backfilling, Regrading, Slope Stability and Recontouring) of the State Mining and Geology Board Reclamation Regulations, as well as all applicable County and Flood Control District requirements.

4) ***Engineering Design***: All physical improvements created as a result of mining and/or reclamation, including, but not limited to levees, drainage facilities, grade stabilization structures, bank protection, grading and slopes shall be designed by a licensed engineering professional in conformance with all applicable engineering standards.

Policy Reclamation-VIII (Restoration of Disturbed Areas): Require restoration of all areas disturbed by mining operations such as haul roads, temporary drainage culverts, processing facilities, stockpile areas and similar features, to a condition compatible with surrounding wildlife habitat and/or agricultural use as specified in the County approved reclamation plans.

Implementation Standards and Plan Requirements:

1) ***Reclamation Plan Implementation***: Habitat revegetation and agricultural restoration programs shall be implemented in conformance with SMGB Performance Standards for Wildlife Habitat and Revegetation (State Mining and Geology Board, PRC Article 9, §3703 and 3705, respectively) and SMGB Reclamation and Performance Standards for Prime and Other Agricultural Lands as set forth in PRC, Article 9, §3707 and 3708 of SMARA and County Ordinance throughout the life of the project (except as specifically modified by project mitigation measures, then such mitigation measures shall take precedence).

2) ***Content of Revegetation Plans***: Any revegetation/restoration plans shall address the following issues:

   b) Site preparation and placement/storage of topsoil
   c) Soil amendment (if required)
   d) Proposed plant materials and/or seed mix
   e) Planting procedures
   f) Irrigation (if required)
   g) Maintenance, monitoring, and management of revegetation
   h) Success criteria consistent with State performance standards.

3) ***Facilities***: All processing facilities and equipment shall be removed from the project area upon termination of mining unless converted to a permitted use under applicable zoning and general plan requirements.

Policy Reclamation-IX (Mining Waste): Mining waste/processing fines shall not be left in or deposited into the river channel. All mining waste/processing fines shall be utilized for land reclamation purposes in accordance with the approved reclamation plan and applicable permit conditions.

Implementation Standards and Plan Requirements:

1) ***Fines:*** In order to prevent any increase in turbidity, fines not used in ongoing agricultural reclamation shall be disposed of outside the floodplain where they cannot be washed back into the river (except if approved for use in levee construction). Fine disposal sites shall be indicated on the Periodic mining plans which will be submitted to each agency with permit jurisdiction for review and approval.

Policy Reclamation- X (Compliance With State Performance Standards): Any mining and reclamation plan approved by the Counties pursuant to this Specific Plan must be in full compliance with all applicable SMARA and State Mining and Geology Board regulations and performance standards.

Implementation Standards and Plan Requirements:

1) ***SMARA Performance Standards***: Compliance with the following SMARA Performance Standards (or any subsequent amendments) shall be required as part of any discretionary permit issued by the Counties for mining and reclamation:

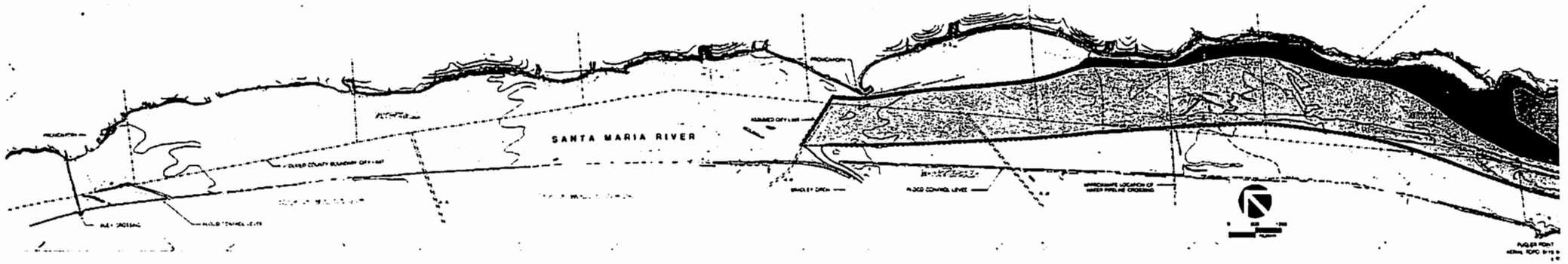
   a) Section 3703 (Wildlife Habitat)
   b) Section 3704(Backfilling, Slope Stability)
   c) Section 3705 (Revegetation)
   d) Section 3706 (Drainage & Erosion Control)
   e) Section 3707 & 3708 (Agriculture)
   f) Section 3709 (Building Removal)
   g) Section 3710 (Stream Protection)
   h) Section 3711 (Top Soil Salvage)
   i) Section 3712 (Waste Management)

Policy Reclamation-XI (Surplus Habitat Banking): Reclaimed lands designated for wildlife habitat, but not required as habitat mitigation to off-set project impacts, may be included by the applicant in a mitigation banking program to mitigate for impacts unrelated to the mining operations, subject to agency review and approval through amendment of any implementing discretionary permits, including any applicable State and Federal requirements pertaining to establishment of mitigation banks.

CHAPTER IV: LAND USE

LAND USE PLAN

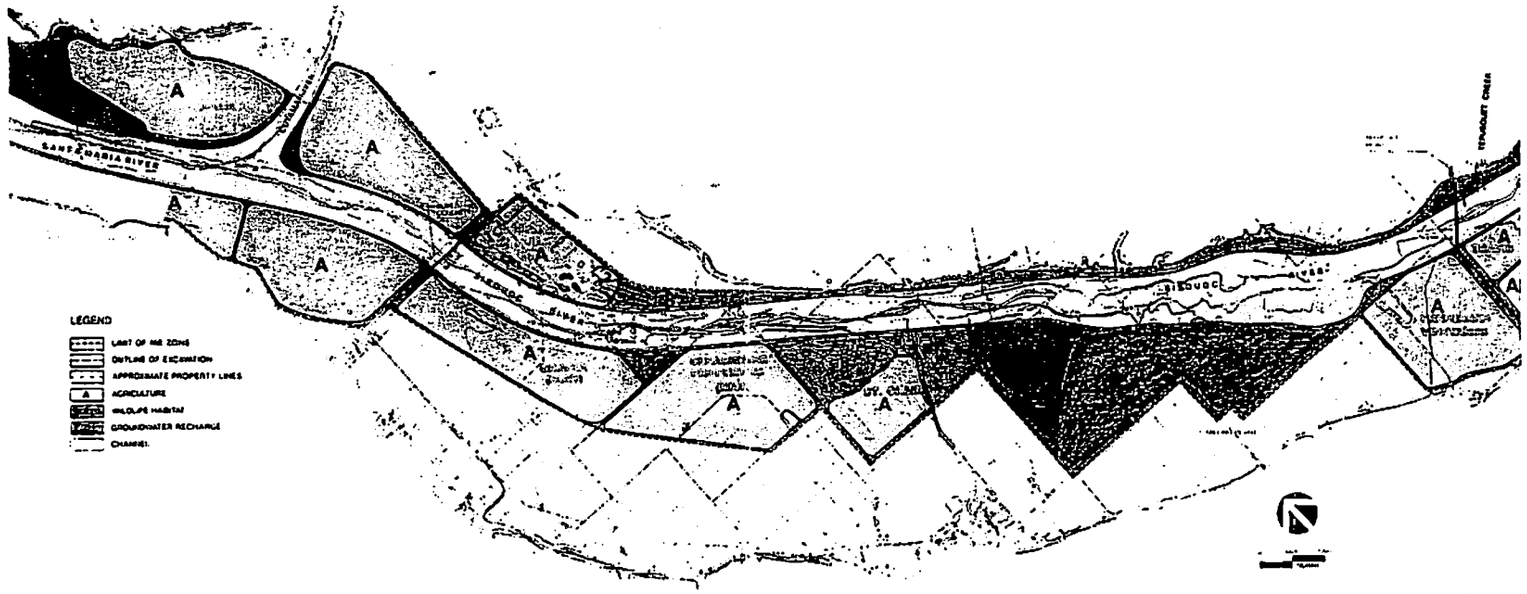
The Land Use Plan, presented in Figures 23-26 indicates the location and extent of the land uses proposed in the mining area after completion of mining. The primary aim of the Land Use Plan is to establish land uses within the area to be mined that will not conflict with the existing and proposed mining operations. To meet this end, the plan proposes a mix of low intensity uses that are intended to be compatible with the existing general plan designation in each of the jurisdictions and with proposed mining operations. The Land Use Plan includes river channel (CHNL), new and reclaimed agricultural uses (A), creation of mineral resource zones for areas planned to be mined (MR), a mining transition area (TA) to ensure land use compatibility within 1000 feet of areas planned for mining, and sensitive habitat planning areas (SH) to protect existing and reclaimed sensitive habitat areas. Each of these land uses responds to one or more of the goals and objectives established for this Plan.



LEGEND

- LIMIT OF MR ZONE
- OUTLINE OF EXCAVATION
- APPROXIMATE PROPERTY LINES
- AGRICULTURE
- WILDLIFE HABITAT
- CHANNEL

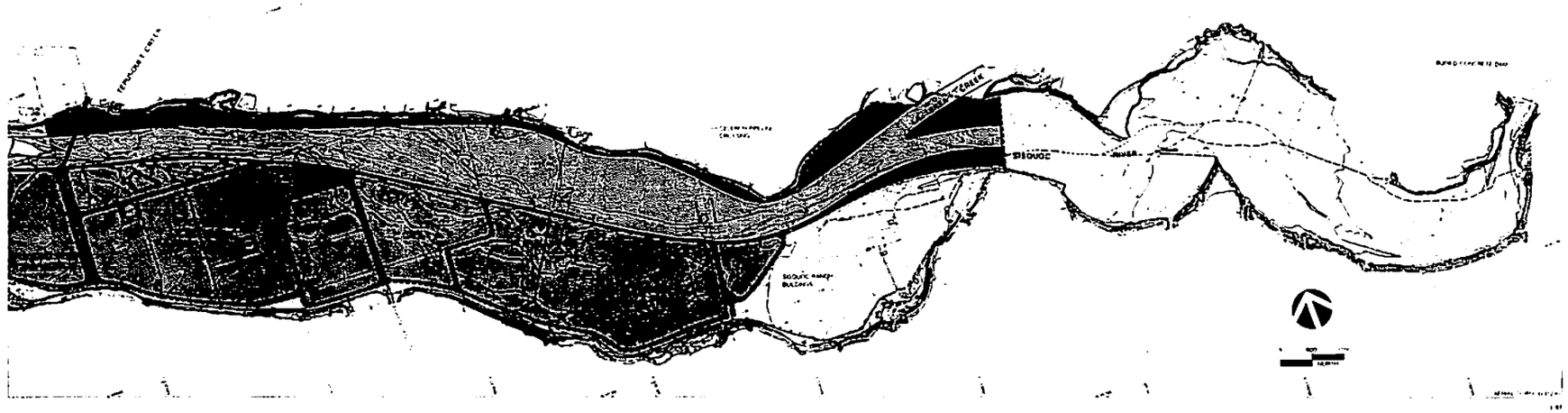
MRP-1b SPECIFIC PLAN LOWER REACH



San Luis Obispo County | *Santa Barbara County*

Figure 24
Coast Rock Middle Reach Plan

Santa Maria & Sisquoc River Specific Plan



LEGEND

- LIMIT OF MR ZONE
- OUTLINE OF EXCAVATION
- APPROXIMATE PROPERTY LINES
- AGRICULTURE
- WILDLIFE HABITAT
- CHANNEL

MRP-1b SPECIFIC PLAN UPPER REACH

San Luis Obispo County *Santa Barbara County*

Figure 25
Coast Rock Upper Reach Plan

Santa Maria & Sisquoc River Specific Plan

TABLE 7

SUMMARY OF PROPOSED POST-RECLAMATION LAND USE
(Coast Rock Project Area)

Land Use	Santa Barbara County Acres	San Luis Obispo Co Acres	Total	% of Plan Area
Agriculture	1,115.6	90.9	1,206.5	38.4
Wildlife Habitat				
Inundation Basins	66.0	5.4	71.4	2.3
Detention Basins	10.5	—	10.5	.3
Channel Side Slopes	103.1	30.1	133.2	4.2
Pit Slopes	189.4	20.1	209.5	6.7
Terrace and Levee Tops	342.6	141.4	484.0	15.4
Groundwater Recharge	0	0	0	0
Channel	656.3	366.8	1,023.1	32.6
TOTAL	**2,483.5**	**654.7**	**3,138.2**	**100**

TABLE 8

SUMMARY OF PROPOSED POST-RECLAMATION LAND USE
(Kaiser Sand and Gravel Project Area)

Land Use	Acreage	% of Plan Area
Agriculture	0	0
Groundwater Recharge	0	0
Wildlife Habitat		
Channel (In and Adjacent)		
Riparian	2.2	<1
Mulefat Scrub	8.0	2.0
Open Channel	80.3	20.0
Wildlife Habitat		
Off-Channel (Pits, Slopes, Silt Pond)		
Riparian/Mulefat Scrub Meadow	199.2	49.8
Undisturbed	110.2	27.6
TOTAL	**400**	**100.0**

PERMITTED LAND USE DURING MINING OPERATIONS

During the life of the mining operations, mining is to be the primary user permitted in the Plan area. Only those uses that are compatible with mining or are incidental to mining should be permitted. As the lands are mined and reclaimed, vegetation and habitat will be restored to a similar (or better) condition to that which currently exists in the project area. Portions of the Plan area not proposed for excavation will remain in their natural state. No change in use shall be considered until mining and reclamation are complete. At the conclusion of mining and reclamation, all uses permitted in the underlying General Plan and Zoning designations may be permitted subject to conformance with Plan policies and standards.

The portion of the Plan area within San Luis Obispo County is within an existing County EX-1 land use combining designation. The intent of this designation is to protect existing resource extraction areas and operations from encroachment by incompatible land uses that could hinder resource extraction, or land uses that could be adversely affected by extraction. The EX-1 designation was adopted pursuant to and as required by SMARA. The San Luis Obispo County Land Use Ordinance sets forth the processing requirements, application content, permit requirements, plan review requirements and procedures, and reclamation plan requirements for use approval for the EX-1 designation. These requirements are outlined in Sections 22.07.040 through 22.07.052 and Sections 22.08.180 through 22.08.192 of the San Luis Obispo County Land Use Ordinance and are included in Appendix D of this Plan.

SPECIFIC PLAN PLANNING AREA DESIGNATIONS

In order to implement the policies set forth in this plan to provide for mineral extraction and to avoid the development of incompatible land uses adjoining mineral extraction operations, the proposed mining areas and an appropriate amount of surrounding land should be given additional land use protection. This plan proposes creation of three planning area designations which will trigger specific review procedures and land use restrictions to protect aggregate resources, land uses adjacent to mining areas, and sensitive biological resources.

Policy Land Use – I (Land Use Compatibility): Avoid conflicts with adjoining land uses by establishing a buffer zone between areas designated for mining and adjacent areas, including appropriate land use controls and notification requirements to reduce the potential for land use incompatibilities between mining and other agricultural and residential uses.

Policy Land Use – II (Protection of Areas Planned for Mining) Establish regulatory mechanisms to ensure that conflicting land uses are not permitted within areas designated for mining.

Implementing Standards and Plan Requirements:

1) **Mineral Resources Planning Area** (Santa Barbara County) :A Mineral Resources (MR) zone designation is placed as a planning area on all areas within Santa Barbara County proposed for future mining. The limits of the MR zone are coterminous with the limits of the proposed mining operations. In this zone, land use other than mining shall be restricted to those uses permitted by the underlying general plan and zoning designations existing at the time this plan is adopted. Until

mining is complete on each MR zoned parcel, no discretionary action shall be taken by the Counties to permit or authorize any use that would be incompatible with the planned mining use of the area. This planning area designation also alerts the Counties and landowners to the fact that the site contains a significant mineral resource that is planned for future extraction and should therefore be protected.

Note: Within San Luis Obispo County, the existing EX-1 Combining Designation identifies areas of significant mineral resources within the project area. Within this area, the requirements of Section 22.07.050 et seq. of the San Luis Obispo County Land Use Ordinance apply. These require, in part, that any use other than mineral resource extraction may be approved only when the finding is made that the proposed use will not adversely affect the continuing operation or expansion of a mineral resource extraction use.

2) **Mining Transition Area** (Santa Barbara County): A Mining Transition Area (TA) to prevent land uses incompatibilities on adjacent lands is placed over all lands within 1,000 feet of the boundary of the MR zone. Property within this area in Santa Barbara County is subject to the requirements described below:

a) **Notice:** Upon adoption of the Specific Plan, all property owners within the Plan area and the Transition Area shall be provided notice by certified mail in a form approved by the Counties (funded by the mine operators), to alert current owners of these lands of the presence of nearby mining operations, future mining plans, land use restrictions, required and recommended setbacks, and mining access and transportation routes.

b) **Acknowledgement of Plan Requirements**: Prior to granting any land use permit approval for development within the Transition Area, all applicants shall provide a signed statement to the County indicating they have read and understood the noticing document recorded pursuant to this section.

c) **Compliance with Noise Element**: Any permit approval involving location of land uses within the Transition Area defined as "sensitive receptors" by the County Noise Element shall include documentation confirming compliance with all applicable Noise Element Policies .

d) **Findings for Future Discretionary Actions**: Within the Transition Area, any future requests by property owners for discretionary approvals (General Plan Amendment, Rezoning, Use permits, etc.) shall require a finding for approval that the proposed use is compatible with current or future mineral extraction operations within the adjacent MR zone and the adopted Specific Plan.

e) **Special Conditions for Future Discretionary Actions**: During the consideration of any discretionary approval of uses within the Transition Area, conditions to reduce or prevent incompatibilities with adjacent mining operations may be placed on such uses which include, but are not limited to, the following:

- Relocation and/or reorientation of a proposed use on the site.

- Special construction techniques such as acoustical insulation and limitation of window area.
- Fencing, screening, berming and landscaping.
- Additional setbacks from MR areas.

These planning area zones and use restrictions may be removed once mining and reclamation operations are complete.

3) **Mining Transition Area** (San Luis Obispo County): Property within the Mining Transition Area within San Luis Obispo County is subject to the following requirements:

   a) **Limitations on Use**: Within the Transition Area, all land uses allowable by Table "O" are permitted except those uses that are identified in the Noise Element as sensitive receptors which are required to comply with Policy 3.3.4 of that element.

   b) **Land Use Permit**: Minor Use Permit approval is required for all residential uses, and bed and breakfast facilities.

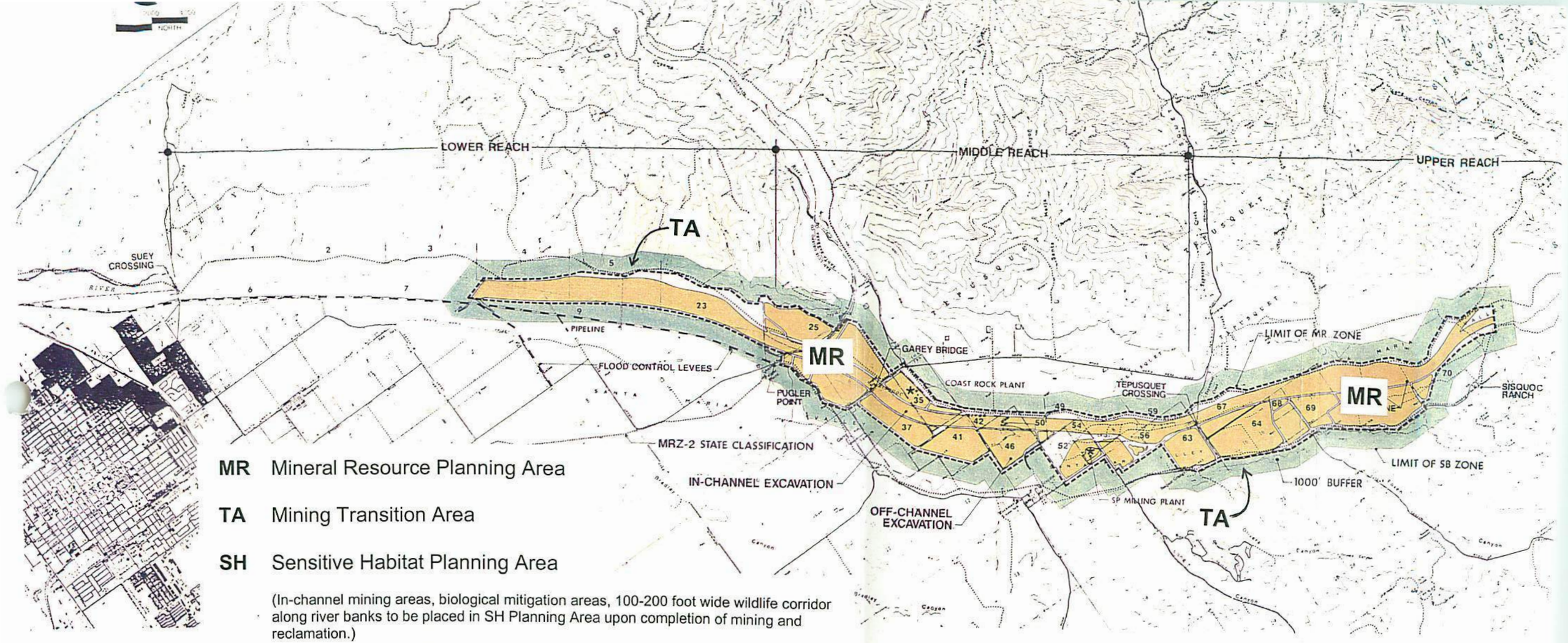
   c) **Findings:** Within the Transition Area, discretionary approvals (Including land use permits and general plan amendments) shall require a finding for approval that the proposed use is compatible with current and future mineral extraction operations within the adjacent EX-1 Combining Designation. Also, that the proposed use will not adversely affect the continuing mining operation or expansion of the mining operation and the project is consistent with the policies and standards of this specific plan.

   d) **Conditions:** During the consideration of any discretionary approval of uses that are potentially incompatible with an adjoining mineral extraction operation, conditions may include, but are not limited to:

      - Relocation and/or reorientation of a proposed use on the site.
      - Special construction techniques such as acoustical insulation and limitation of window area.
      - Fencing, screening, berming and landscaping.
      - Additional setbacks from EX-1 Combining Designation areas.

These planning area zones and use restrictions may be removed once mining and reclamation operations are complete.

3) **Sensitive Habitat Planning Area:** Pursuant to policies and implementing standards in Chapter IV (Biological Resources), all in-channel mining areas, all biological resource mitigation sites, and the 100 to 200 foot wide wildlife migration corridor adjacent to the river banks within the entire project area shall be designated "SH" upon completion of mining and reclamation in the area. Within the "SH" area, habitat shall remain undisturbed with certain minor exceptions as delineated in the biological resource protection policies in this Plan, including future habitat banking/restoration efforts that may be approved for this area by the County and/or any flood and erosion control activities approved by the County which may be necessary for protection of existing property



MR Mineral Resource Planning Area

TA Mining Transition Area

SH Sensitive Habitat Planning Area

(In-channel mining areas, biological mitigation areas, 100-200 foot wide wildlife corridor along river banks to be placed in SH Planning Area upon completion of mining and reclamation.)

LEGEND

EXCAVATED AREA

1000' BUFFER

SP MILLING OPERATION - PARCELS 52, 54 AND 56
COAST ROCK OPERATION - BALANCE OF SPECIFIC PLAN

MRP-1b SPECIFIC P

San Luis Obispo County

Figure 28
Specific Plan Planning Area Designations
(Refer to Figures 16, 17, 23, 24 and 25 for final land use pursuant to the reclamation plans.)

Santa Barbara County

Santa Maria & Sisquoc River Specific Plan

Policy Land Use – III (Residential Development in Mining Areas): Prohibit residential use within areas designated for mining (MR zones) unless special performance standards governing the development and location of such residential use are adhered to by the landowner.

Implementing Standards and Plan Requirements:

1) **Building Site Designation** (Santa Barbara County): A future potential residential building site shall be identified on each legal parcel within the Plan area. Said building site shall be a minimum of one acre in size, located on the perimeter of the parcel, and shall be a minimum of two feet above the 100 year flood elevation in accordance with Santa Barbara County Ordinance. No.3098. Said building site shall be improved in conjunction with completion of reclamation of said parcel. Alternatively, prior to commencement of surface mining operations on any off-channel parcel, the operator shall acquire, or if the parcel is already owned by the operator, restrict, the development rights to said parcel in a form and manner acceptable to County Counsel precluding future development of any habitable structures on said parcel.

Also See Standards for Land Use Policy II above.

Policy Land Use – IV (Noise Effects on Residential Uses): Ensure that interior noise levels at residential uses in close proximity to proposed mining operations do not exceed County standards as a result of mining operations.

Implementing Standards and Plan Requirements:

1) **Nighttime Mining** (Santa Barbara County): Nighttime mining operations (10 p.m. to 6 a.m.) shall not be allowed in areas within 1,600 feet of existing residential structures to avoid nighttime noise impacts (unless a written waiver is received from the affected property owners for limited, short term operations not to exceed 30 days per year).

2) **Nighttime Mining** (San Luis Obispo County): Nighttime mining operations (10 p.m. to 7 a. m.) shall not be allowed in areas within 1,600 feet of residential structures to avoid nighttime noise impacts (unless the applicant substantiates through a noise analysis that the policies of the Noise Element will be met).

    b) New development of noise sensitive uses must be consistent with Noise Element Policy 3.3.4.

    c) Noise levels that will expose vacant land on adjacent property to the site being mined shall be consistent with Noise Element Policy 3.3.5.c.

    d) Existing noise-sensitive land uses that are allowable uses will not be exposed to noise levels that exceed the requirements of Noise Element Policy 3.3.5.d.

3) **Equipment Replacement**: Any new equipment purchased to replace unusable equipment shall be fitted with noise shielding and muffling devices. The operator shall inspect equipment periodically to ensure that it is working effectively and in compliance with new noise level regulations.

4) **Kaiser Pit Noise** (Santa Barbara County): Prior to Periodic MRP approval for any mining in the Davis pit, Kaiser Sand and Gravel shall prepare an acoustic study to evaluate potential noise impacts from surface mining operations on the existing residences fronting on Foxen Canyon Road at the southwest corner of the project site and immediately west of the Carranza Pit. Should the noise levels from planned mining operations be found to violate County interior noise thresholds (45 Dba CNEL Interior), then the mining operator shall either fund the necessary retrofit to ensure that noise levels affecting these residences do not exceed County standards; acquire the development rights to these parcels; or implement any other method for reducing noise to acceptable levels subject to review and approval of the County.

Policy Land Use – V (Visual Buffering): All existing and proposed processing facilities shall be screened or buffered from public view, where determined to be necessary by the County Planning Commission upon site specific permit review, through a combination of landscaping, grading, slope treatment, siting, and fencing as required by the County through any subsequent implementing permits.

CHAPTER V: RIVER CHANNEL

BACKGROUND

The Specific Plan area is located along a 12 mile portion of the Santa Maria and Sisquoc Rivers, extending from Bradley Ditch on the Santa Maria River to approximately 2.5 miles feet downstream of the underground dam (of the Sisquoc Ranch) on the Sisquoc River. Upstream of the Specific Plan area, the Sisquoc River continues about 40 miles through mountain canyons in the San Raphael Wilderness, to its headwaters on the north flank of Big Pine Mountain in eastern Santa Barbara County. Most of this distance, the river flows within the Los Padres National Forest. Downstream of the Specific Plan area, the Santa Maria River continues about 16 miles through a seasonal wetlands area east of the sand dunes where the river flow normally ends.

From the upstream limit of the Specific Plan area, the Sisquoc River flows northwesterly for approximately eight miles to its junction with the Cuyama River. The river becomes the Santa Maria River at this confluence and reaches Bradley Ditch approximately 4 miles further downstream. The river system is part of the southern Coast Ranges province characterized by elongated ranges and narrow valleys and canyons. The Sisquoc and Santa Maria rivers are fed by a number of tributaries emanating from narrow canyons in the Sierra Madre and San Rafael Mountains forming the backdrop for the rivers.

The major tributary feeding into the river system is the Cuyama River. Other important tributaries include La Brea Creek and Tepusquet Creek flowing from the north and Foxen Creek and Bradley Ditch flowing from the south. There are several smaller tributaries emanating from the canyons which add local drainage and agricultural runoff to the flow.

The river meanders over a wide floodplain, except where a channel has been deepened and defined by mining in the streambed. This river system is seasonal and is dry most of the year under normal conditions and for longer periods during a drought. However, during occasional heavy storm years, the river can carry large amounts of water and material swiftly down river. This is why the floodplain is so wide and why the state-designated MRZ-2 zone is so pronounced across the Santa Maria flood plain.

Historically, the stream meander has eroded the banks, stripped farmland of soil and undercut portions of the flood control levees downstream from Fugler Point. Upstream from Fugler Point, there generally is a high bank on the north side of the Sisquoc River and a less clearly defined lower bank on the south side, but beginning above the confluence with La Brea Creek, there are high banks on both sides and the valley becomes quite narrow at its upper end.

Highway 101 crosses the river about two miles downstream from Suey Crossing. From Highway 101 to the confluence of the Cuyama and Sisquoc rivers, there are high bluffs along the north side of the flood plain and flood control levees define a flood limit along the south side of the river. The upstream levee ties into Fugler Point, a promontory just opposite the confluence.

Twitchell Dam and Reservoir are on the Cuyama River about eight miles upstream from its confluence

with the Sisquoc River. On the Sisquoc Ranch, below the upstream limit of the project, there is a buried concrete dam which was installed in the early 1900s to capture the river underflow for ranch use.

The Santa Maria and Sisquoc Rivers have been disturbed by human activity consisting of dam and levee construction, sand and gravel mining and channel projects. Because of this, the natural equilibrium of the river channel has been altered. Dam construction, particularly the Twitchell Dam and other smaller structures, such as the underground dam at the upper end of the Specific Plan area, has caused changes in channel velocity and sediment transport.

The Sisquoc and Santa Maria rivers are ephemeral, with no surface flow occurring about 83% of the time. Discharges that occur are highly variable. The sediment sizes making up the bed and parts of the banks of the river also have a large range of sizes. They range from fine sand having an equivalent diameter of less than 0.2 millimeters (0.01 inches) in the downstream reaches through boulders having an equivalent diameter of over 500 mm (20 inches) in the upstream reaches. The bed slope of the rivers vary from about 15 feet per mile near Suey Crossing to 33 feet per mile in the upstream reach between Tepusquet Road and La Brea Creek. At lower flows having more frequent recurrence, the river has a tendency to meander in the lower reaches. In the upstream reaches, the river is braided and the location of the stormwater meander zone and ordinary flow channel may shift during floods.

The maximum instantaneous flow within the system was recorded at the Guadalupe gauge in January of 1952. Prior to establishment of the gauge, there were historical reports of even larger, catastrophic flood flows in 1864, 1909 and 1914, with reports of thousands of farmland acres lost to erosion.

SISQUOC RIVER

Between 1900 and 1930, the Sisquoc River migrated 2000 feet south at the Garey Bridge. In the 1930s, flood protection was a major issue in the valley. In the late 1950s, several flood control projects were constructed on the upper Santa Maria and lower Sisquoc rivers. Twitchell Dam began construction in 1958, was completed in 1959 and filled with water up through 1962. In April of 1958, there was a very large discharge in the confluence area that damaged the former Garey Bridge, which was re-constructed in 1959. In the same year, construction began on the ACOE levees, which were completed in 1963.

The eight-year period between 1959 and 1966 was relatively dry, with the exception of February 1962. In June of 1966, there was a major wildfire (the Wellman fire) that burned 150 square miles of Sisquoc watershed. This was followed by major storms in 1967 and 1969, both of which caused damage to the ACOE levees. The 1969 floods carried the largest daily flow yet recorded at the Garey Bridge gauge.

The second largest flow in the 50-year history of this gauge occurred in March of 1983. The 1983 flood played particular havoc on the Sisquoc River. Over 200 acres of farmland on the Sisquoc Ranch were lost on the south side of the river for about one mile downstream of La Brea Creek. A levee between the stream channel and a deep pit that had been excavated by Kaiser Sand and Gravel was breached and the entire pit was filled with an estimated 1.2 million tons of sediment. There was scouring at the Garey Bridge and damage to the ACOE levee south of the bridge. Following this,

several steps were taken to strengthen these facilities. In addition to revetment work on the levees such as followed damage in the late 1960s and again in 1980, Coast Rock, in cooperation with the County Flood Control District, began to excavate a pilot channel at the confluence to keep flows away from the ACOE levee. That channel is now about 10,000 feet long, approximately 200-300 feet wide, and 8-10 feet deep. A similar excavation strategy was begun in the La Brea Creek area. The channel is now about 16,000 feet long from upstream of the La Brea confluence downstream toward Tepusquet Creek; about 200-300 feet wide, and 10-15 feet deep. The check dam downstream of Garey Bridge was constructed in 1986 to stabilize the channel bed at the bridge crossing. Revetment work was begun in the Sisquoc Ranch area, and reclamation of the flood-damaged fields with fines from the mining process.

The period between April 1988 and March 1991 was the longest span of no-flow at the Garey Bridge on record. Relatively minor storms in March of 1991 and February of 1992 changed the picture again. The check dam was compromised and the bridge piers exposed by the 1991 storm. The check dam was repaired and widened to the river banks rather than just to high terraces as originally constructed. Again in 1992, however, the check dam needed repair and strengthening. Currently, the County of Santa Barbara is undertaking the construction of the new Garey Bridge and removal of the check dam.

Mechanized gravel mining in the Sisquoc River began in the 1920s. Locations and rates of gravel removal have varied, but operations near Kaiser Sand and Gravel's Sisquoc Plant site and downstream terraces seem to have been continuous. Mining has taken place in nearly all reaches of the stream between Sisquoc Ranch and the confluence with the Cuyama River.

Data from various sources (aerial photos, topographic maps, etc.) was compiled and compared to determine changes in river morphology between 1937 and 1991 on the lower Sisquoc River. A long-term pattern of downcutting was documented, with greatest changes in thalweg grade found where instream mining has been concentrated. Downcutting has occurred disproportionately along the thalweg and generally not across the width of the channel; in much of the stream, a succession of small terraces have been left behind as the stream incised.

Below Kaiser Sand and Gravel's operation, downcutting has averaged approximately 10 feet, with most of the change occurring over the past two decades. Maximum downcutting is on the order of 25-30 feet in the reach of river owned and leased by Kaiser. Upstream of Tepusquet Crossing, incision has been typically 10 - 15 feet along the thalweg. Grades of the tributaries appear to be stable, with no apparent incision. With few exceptions, the channel does not migrate laterally into the bluffs north or south. One incident of terrace infringement occurred between Sisquoc Ranch and La Brea Creek, and is likely related to rapid aggradation of the channel following a large pulse of sediment from storm events after a major fire denuded most of the watershed. Where the stream bed aggrades, the channel is more prone to overbank flooding or lateral migration. The stream is also prone to lateral migration or bank instability where crossing the surface of a restrictive fine-grained deposit such as the clay lenses downstream of Tepusquet Crossing. Observer notes suggest that the channel has migrated several times through the width of the Garey Bridge. Santa Barbara County engineering staff have noted 5 - 10 feet of incision in this area over the past 10 to 15 years.

SANTA MARIA RIVER

Downstream of the project area, repeated surveys across the Santa Maria River at the railroad bridge in Guadalupe (between 1895 and 1937) show nearly 20 feet of aggradation.Although the evidence is not conclusive, generally there appears to be some interaction between natural processes and changes induced by mining activities. In some cases, mining activities may have prevented significant aggradation near the railroad bridge.

Twitchell Dam has induced channel-bed degradation in the Santa Maria River downstream of Garey Bridge. The degradation in turn induces head cutting at the bridge crossing. Downstream of Fugler Point, the ACOE levees experienced undermining, also due to the angle of impingement from relatively low flows. In addition to revetment, Coast Rock has excavated a more defined channel in this area, in consultation with the County Flood Control District, that has helped keep the river away from the levee banks.

Around the US-101 bridge, there has been significant erosion around the bridge piers and a general lowering of the river channel. This erosion appears to be related to mining activities by other operators in close proximity both upstream and downstream of the bridge. These operations are sand mining operations that skim the channel over a fairly small area to a greater degree than Coast Rock's skimming upstream but a lesser degree than Kaiser Sand and Gravel's pits. Some pits are as deep as 15 feet.

RIVER CHANNEL MINING

Continuation of mining within the river channel is a prominent feature of both the Coast Rock and Kaiser Sand and Gravel operations. River channel mining areas comprise approximately 1023 acres or 32.6% of the Coast Rock project area, with approximately two thirds of this area in Santa Barbara County, and one third in San Luis Obispo County. River channel mining areas for the Kaiser Sand and Gravel operation (entirely within Santa Barbara County) comprise approximately 87.8 acres or 37% of the mineable area on the project site. The length of river proposed to be mined within the Specific Plan area measures approximately 12 miles. Mining operations have occurred in the past along the entire length of the river channel within the area proposed to be mined by this Specific Plan. The mining described in this Specific Plan involves widening and deepening areas where previous mining has occurred.

Within the Coast Rock project area, river channel mining will occur over the entire estimated 64 year life of the project with mining activities targeted for completion upstream from Tepusquet Crossing within the first 10 years of the project. The area downstream of the Cuyama confluence will be mined on an ongoing basis throughout the life of the project, gradually widening and deepening the floodway without creating a defined low flow or pilot channel. Mining depth for the Coast Rock project area will average approximately five feet below the elevation of the existing river thalweg and mining width will be consistent with the location of the existing river bank, varying from 400 to 1200 feet at various locations along the river. The channel is designed to convey a 100 year flood event through the project area. The overall average gradient of the river channel is not proposed to change significantly throughout the project area as a result of mining operations. Channel side slopes will be left at a 3:1 gradient and adjacent levee tops will be a minimum of 50 feet wide. The river banks will be vegetated with native plant species upon completion of mining. Bank protection may be required in areas subject

to excessive erosion as determined by the County Flood Control District. Grade control structures are not proposed within the river channel or at the confluence of any tributaries; however, should such structures prove necessary in the future, further environmental review and separate permits will be required for each structure.

Within the Kaiser Sand and Gravel project area, river channel mining will take place in the East and West Units to designated redline depths and channel widening will occur to coordinate with the channel configuration that will be implemented by Coast Rock upstream and downstream from the Kaiser site. The channel widening is estimated to be completed within the first 10 years of the project. The frequency of other in-channel mining will be determined by the extent of sediment deposition in relation to the designated redline channel elevations. No further mining will take place in the Ledges Unit at the upstream limit of the Kaiser project area.

Neither operation will mine within flowing waters of the river channel. No aggregate materials will be stockpiled within the river channel. No pits will be created within the river channel. Mining operations will gradually create a smooth, uniform channel at the ultimate width, depth, and gradient specified in the approved mining plan for each operation.

RIVER CHANNEL MINING ISSUES

Any change in the configuration of the river channel as a result of mining operations must be carefully considered in terms of possible effects on flood control, critical structures within the river, erosion, sediment transport, groundwater recharge (see Groundwater Resources, Chapter VIII) and river morphology. These effects must be considered within the project area and throughout the watershed in the upstream and downstream directions. The sequence of mining within the river and the importance of coordination between mining operations to prevent adverse effects on surrounding properties must also be addressed. The policies, implementing standards and plan requirements listed below are intended to address these issues.

Policy Channel-I (Flood Protection): Provide protection against destructive stream flows for farmland, flood control levees, and other critical structures and improvements through implementation of an agency-approved channel design and mining and reclamation plan. Create a flood channel designed to convey a 100 year flood at depths and widths as indicated on the County approved master mining and reclamation plan.

Implementing Standards and Plan Requirements:

1) **Mining and Reclamation Plan**: Those portions of the Santa Maria and Sisquoc Rivers within the Coast Rock project area shall be mined in substantial conformity with the "Master Mining and Reclamation Plan" approved by Santa Barbara County (92-CP-074) and San Luis Obispo County (D920088D), including all diagrams and figures in this Plan.

Policy Channel-II (Mining Sequence for Coast Rock Project Area): In order to provide for the orderly progression of mining and reclamation throughout the Plan area, the sequence of mining for Coast Rock

shall substantially conform to the phasing program and mining sequence described in Chapter III of this Plan.

Policy Channel-III (Mining Plan and Mining Sequence for Kaiser Sand and Gravel): Limit in-channel mining to designated sequence, depths and locations to ensure that sand and gravel will be mined at no more than the sustainable yield.

Implementing Standards and Plan Requirements:

1) **Mining and Reclamation Plan** (Santa Barbara County): Those portions of the Santa Maria and Sisquoc Rivers within the Kaiser Sand and Gravel project area shall be mined in substantial conformity with the "River Mining Plan" approved by Santa Barbara County (86-CP-106 RV01), including the phasing program and all diagrams and figures in this Plan.

Policy Channel- IV (Periodic Review): Provide for periodic review of mining and reclamation operations throughout the life of the project. Such periodic review shall be coordinated with the permit review cycle of any Army Corps of Engineers Section 404 permits that may be required for the project.

Implementing Standards and Plan Requirements:

1) **Periodic Plan Review:** Prior to commencement of surface mining operations for Phase I and coinciding with each Section 404 permit renewal after the initial commencement of mining,-the applicant shall submit a mining and reclamation implementation plan (MRP) for the upcoming Section 404 permit period for review and approval by each applicable agency of jurisdiction. The purpose of the periodic MRP is to provide a method of monitoring compliance with project conditions and mitigation measures on an ongoing basis for the life of the project. All mining and reclamation shall be performed in substantial conformity with each approved Periodic MRP. Substantial conformity shall be determined jointly by each agency responsible for plan review and project monitoring. The accompanying written project description shall include a detailed description of the progression of mining during the permit period. Said plan, and accompanying written project description, shall provide topographic data (including grading plans and cross-sections at appropriate scale and contour intervals) depicting in-channel and off-channel mining and reclamation activities for the upcoming review period, plans for any structures or improvements proposed to be implemented during the upcoming review period, aerial photographs for the area(s) proposed to be mined and reclaimed and any other information determined necessary by the Counties in order to ensure compliance with the approved master mining and reclamation plan and any project conditions.

Policy Channel- V(Permit Reviewr): Provide mechanisms for reviewing the efficacy of project conditions in relation to flood prevention and protection of critical structures on an ongoing basis by establishing procedures for discretionary project review when necessary throughout the life of the project.

Policy Channel- VI (Future Modeling): Provide a regulatory mechanism for ensuring that the hydrology/sediment transport model for the project area can be updated if substantial changes to the project setting occur and/or changes to the project description are proposed which may affect hydrology and sediment transport.

Implementing Standards and Plan Requirements:

1) **Ongoing Permit Review**: In the event that modifications to approved in-channel surface mining operations are requested, or in the event that flood flows have substantially altered the channel configuration as determined by the County Flood Control District, in consultation with other responsible agencies, the District may require the operator to reanalyze sediment transport, geomorphological, and flood conveyance impacts with an approved method. Re-evaluation would determine whether the proposed project modifications or changes to the project setting would result in new or more severe potentially significant impacts on sediment transport and/or river morphology. If such new or more severe impacts are predicted to occur and the agencies determine that existing project mitigation measures and conditions would not adequately address such impacts, any permits issued for mining and/or reclamation with respect to all in-channel mining areas may referred to the Planning Commission in each County for review. The Planning Commissions may add, replace, modify or rescind project conditions as necessary to address any new or more severe potentially significant impacts.

Policy Channel- VII (Grade Control Structures): Avoid installation of in-channel grade control structures unless alternative means of reducing project related upstream erosion to less than significant levels are demonstrated to be infeasible. If in-channel grade control structures are demonstrated to be necessary, such structures shall require separate environmental analysis and shall require an amendment or revision (as determined by the Director of Planning) of the project conditional use permit(s).

Implementing Standards and Plan Requirements:

1) **Head-cutting Prevention**: Prior to approval of each Periodic MRP, the County, in consultation with the ACOE, shall determine whether in-channel mining is causing or is likely to cause head-cutting at any river tributaries. If, in the opinion of the County and ACOE, head-cutting is likely to occur, the County and ACOE may require modifications to in-channel mining practice as necessary to minimize the potential for tributary head-cutting.

2) **Grade Stabilization Structures**: Grade stabilization structures shall only be permitted if alternative means to address the potential for tributary head-cutting are not feasible. Should grade stabilization structures prove to be necessary, separate permitting and environmental review for said structures shall be required by the County and the ACOE. Grade stabilization structures shall be designed to minimize adverse impacts on river morphology, riparian and wetland vegetation, and fish migration. Any approved stabilization structures shall be designed by a registered professional approved by the Counties. Any stabilization structures shall have crest elevations similar to the natural streambed.

3) **Enforcement:** If new, unanticipated adverse impacts occur, attributable to approved mining operations, beyond those identified in the original impact analysis, then the applicant(s) shall be required to mitigate such impacts to the maximum extent feasible in conformance with Section 3710(c) CCR pursuant to County Planning Commission review. If the additional mitigation is not effectively reducing impacts to less than significant levels, the agencies may require the operators to curtail and/or stop mining which is causing or contributing to these impacts pursuant to SMARA Section 2774.1

Policy Channel- VIII (Bank Protection): Require bank protection to be bio-engineered, where feasible, to allow for vegetation and wildlife migration.

Implementing Standards and Plan Requirements:

1) **Bank Protection**: Bank protection or other alternative erosion control methods, acceptable to the County Flood Control District, shall be required along the banks of the proposed levees and channel excavations at critical locations as determined by the Flood Control District. Said bank protection shall be designed by a registered professional approved by the Counties subject to the review and approval of the Flood Control District. Where feasible, alternative, bio-engineered methods of bank protection to minimize effects on wildlife and habitat are preferred.

Policy Channel- IX (Maintenance): Provide for long-term maintenance of any levees, dams, grade control structures, or other facilities constructed/created as a result of mining operations within the project area.

Implementing Standards and Plan Requirements:

1) **Maintenance Agreement**: The mine operators shall be responsible for the maintenance and repairs of any levees, dams, grade stabilization structures or other facilities constructed/created as a result of mining operations within the project area throughout the life of the mining project. Maintenance thereafter shall be by agreement between the operators and the property owner(s). However, each property owner shall ultimately be responsible for adequate maintenance of all structures in conformity with Flood Control District requirements. Existing and prospective property owners shall be informed through recordation of a "Notice to Property Owner," of the estimated level of effort/cost of maintaining grade control structures.

2) **Crossing Maintenance**: The mine operators shall maintain or modify dip crossings at Tepusquet, during normal and low flow years to the satisfaction of the County Public Works Department and Flood Control District throughout the project life.

3) **Maintenance Agreement**: A private maintenance agreement for all required in-stream or tributary grade control/stabilization structures, levees, drainage conveyance facilities and basins shall be prepared to the satisfaction of the County Flood Control District and County Counsel, including

financial assurances for said maintenance and a "Hold Harmless/Indemnification Agreement" in favor of the County and Flood Control District.

4) **Levee Repair**: If any levees breach or are subject to imminent breach as determined by the County Flood Control District, either during or after completion of surface mining operations, then the applicant or successor property owner shall be required to reconstruct the levees or complete other remedial action as directed by the County Flood Control District before any mining proceeds in the affected area or as set forth in the approved maintenance agreement. Any levee reconstruction shall conform to all applicable project conditions pertaining to design, location, setbacks, slopes as determined by the County Flood Control District.

Policy Channel- X (Minimize Interference with Sediment Transport through the Rivers and Tributaries):

A. Conduct all in-channel mining in a manner which shall minimize impacts on sediment transport throughout the river.

B. Prohibit creation of distinctive topographic depressions within the channel which can adversely affect river flows and sediment transport.

C. Require analysis of any future grade control structures which may be required in-channel to consider effects on sediment supply.

D. Create a flood channel through mining operations designed to minimize impacts on sediment transport through the project area.

Implementing Standards and Plan Requirements:

1) **Channel Mining Configuration**: No isolated, local in-channel pits shall be permitted. Mining within inundated areas of the channel shall not be permitted. The in-channel mining shall be done in a progressive, sequential manner by widening existing channel areas as excavation advances upstream and downstream. Excess sand from in-channel excavations may be left in-channel provided that the design and configuration of the channel conform to approved project plans.

Policy Channel-XI(Protection for Critical Structures):

A. Require an ongoing monitoring program to ensure that critical structures within and adjoining the project area are not adversely affected as a result of mining operations.

B. Require adequate regulatory mechanisms to ensure that any unforeseen adverse effects on critical structures resulting from mining operations can be addressed as necessary. Require the mine operators to mitigate any adverse impacts on critical structures (e.g. levees, bridges, pipelines, structures, etc.) attributable to the operators' mining or reclamation activities.

C. Encourage cooperation between mining operators and public agencies with respect to maintenance of critical infrastructure within the project area.

Implementing Standards and Plan Requirements:

1) **Monitoring**: Annual monitoring to ensure compliance with all project conditions, reclamation requirements, and to ensure the adequacy of financial assurances shall take place in coordination with all public agencies with jurisdiction in the project area. Said monitoring shall be carried out by a monitor approved by all agencies with jurisdiction in a manner consistent with the requirements of SMARA and all applicable local implementing ordinances.

2) **Critical Structure Protection**: If at any time the County Flood Control District, Army Corps of Engineers, Public Works Department or CALTRANS, after joint consultation, determine that unanticipated impacts to critical structures (i.e. bridges, levees, in-stream grade stabilization structures, bank protection, pipelines, etc.) within the river are occurring, the concerned agency shall notify the Planning Agency of each jurisdiction. The Planning Agency may order a temporary cessation of in-channel surface mining operations throughout the affected area and require the applicant to fund any studies that may be necessary to determine the extent, cause and mitigation of said impact. If the studies determine that surface mining operations conducted by the applicant have directly or indirectly caused or contributed to the impact then the Planning Agency shall refer the project to the County Planning Commission for appropriate action to ensure that the projects' contributions to the impact are fully mitigated.

Policy Channel- XII (Setbacks): Maintain adequate setbacks as determined by the County Flood Control District between mining operations, levees, and public roads, improvements and adjacent properties. Maintain adequate vertical separation between mining operations and any pipelines within the project area.

Policy Channel- XIII (Design Requirements): Require the design and implementation of all mining pits, levees, drainage conveyance structures, slopes, haul roads, stockpiles, and other physical features of the mining operations to be consistent with all applicable standards and regulations, including, but not limited to: SMARA, County Ordinances, Federal Mine Safety Regulations, and Flood Control District Standards.

Implementing Standards and Plan Requirements:

1) **Design Standards**: Prior to approval of the first Periodic MRP, any new levees and levee hard bank protection shall be designed by a registered civil engineer and reviewed and approved by the Santa Barbara County Flood Control District and other permitting agencies. Said design shall assure protection against breaching caused by overtopping, erosion due to high velocity flows, and piping failure.

Policy Channel- XIV (Mining Coordination): Require that the channel transitions between Kaiser Sand and Gravel and Coast Rock in-channel mining operations shall be consistent with the approved master mining and reclamation plan and provide a mechanism for ensuring full coordination between both mining operators.

Implementing Standards and Plan Requirements:

1) **Channel Transition between Operators** (Santa Barbara County): In the event that in-channel surface mining operations are not occurring in a coordinated manner between Kaiser Sand and Gravel and Coast Rock Products with respect to mining sequencing, maintaining approved channel depths, gradients, widths, or any other areas where coordination between the two operators is required by project conditions, the Santa Barbara County Planning & Development Department, in consultation with the County Flood Control District and ACOE, may order in-channel surface mining operations to cease immediately within the affected area under its jurisdiction until the necessary coordination occurs.

2) **Reciprocal Access Easements** (Santa Barbara County): In the event that coordination of in-channel mining operations between Kaiser Sand and Gravel and Coast Rock Products is not occurring in accordance with the approved MRP, the Santa Barbara County Planning & Development Department, in consultation with the Flood Control District may order either operator to maintain a specified transitional channel configuration between their respective surface mining operations that is consistent with the approved MRP. Reciprocal access/surface mining easements and/or agreements to the satisfaction of County Counsel and the Flood Control District shall be provided prior to issuance of a land use permit for the first MRP for either operator to ensure that either operator, upon such order can enter onto an identified transition zone within the boundaries of either surface mining operation to excavate the channel to achieve/maintain the approved transition between surface mining operations in accordance with the MRP. Either operator shall be mutually held harmless in advance from carrying out said activities under said order.

CHAPTER VI: BIOLOGICAL RESOURCES

INTRODUCTION

Biological resources within the plan area are strongly influenced by the natural erosional and deposition processes associated with flows in the Santa Maria and Sisquoc Rivers, as well as agriculture, mining, flood control, and other activities of man. Flood flows have the ability to scour substantial segments of the river within the plan area, denuding such areas of vegetation, while, at the same time, distributing seed and other plant material which will become the basis for new vegetative cover after flows recede. Large areas of native vegetation in both the upper and middle reaches and the northeastern corner of the lower reach have been gradually converted to agriculture (grape vineyards, strawberry fields and other truck crops) leaving a patchwork mosaic of native habitat in certain areas of the rivers. The agricultural uses adjacent to much of the river channel contribute run-off to the rivers and affect wildlife migration through the area. Cattle grazing has also historically occurred in much of the river channel affecting vegetation, drainage and erosion to varying degrees.

Flood Control activities have resulted in channelization of portions of the rivers, limiting the meander of river flows. Retention of water from the Cuyama River at Twitchell Reservoir and the periodic releases of this water to enhance groundwater recharge have also changed the flow characteristics of the river system with corresponding effects on biological resources dependent on river flows.

Finally, mining operations which have been occurring in various portions of the river since the 1920's have resulted in channelization of the river and fragmentation of existing vegetation in areas where mining is ongoing.

Cattle Grazing in the Sisquoc River Upper Reach

SENSITIVE BIOLOGICAL RESOURCES

Sensitive biological resources within the plan area include the following:

- Species listed pursuant to the federal and state endangered species act and their habitats
- Species that are candidates for listing or of special concern and their habitats
- Species listed by the California Native Plant Society
- Species or habitats identified in County General Plans and ordinances as protected
- Plant communities or cover types of special value such as wetlands and riparian areas and areas that provide important wildlife functions such as movement corridors.

The extent of sensitive habitats, including wetlands, riparian willow forest and willow scrub and mulefat scrub that would be affected within the plan area is summarized in the table below:

Table 9

COASTROCK/KAISER
AFFECTED HABITAT
(Estimated Acreage Based on 1992 Survey)

	SBCO	SLOCO
Jurisdictional Wetlands	8.9/2	0
Willow Forest	26/10	0
Mulefat Scrub	632/18	250

VEGETATION

The project area contains a mosaic of native and introduced (exotic) plant communities of varying ages, due to the dynamic nature of the river. Exotic tree species have been planted at various localities throughout the site. These include blue gum (*Eucalyptus globulus*), orange tree (*Rutaceae*), Peruvian pepper tree (*Schinus molle*) and myoporum (*Myoporum acuminatum*).

Several native plant communities considered by the California Department of Fish and Game (CDFG) to be high-priority occur within the site. These communities occur typically as small, isolated patches within the floodplain area upstream of the Tepusquet Road crossing and consist of Southern Cottonwood-Willow Riparian Forest, Central Coast Arroyo Willow Riparian Forest and Central Maritime Chaparral. Venturan Coastal Sage Scrub also occurs within this upland area with purple sage (*Salvia leucophylla*) as the dominant in the eastern portion of the site and black sage (*S. mellifera*) as a dominant in the western portion (near the road that crosses the riverbed south of

Kelley Canyon). Examples of Central Coast Arroyo Willow Riparian Forest also occur in several areas along the northern edge of the floodplain in the lower reach (outside the project boundary).

White sage (*S. apiana*) occurs in the bottomland areas of the eastern end of the upper reach and in the canyon bottom of the Sisquoc River and is co-dominant with purple sage further west. West of this area, mock heather (*Ericameria ericoides* and *E. palmeri*) is dominant in association with scale broom (*Lepidospartum squamatum*), California sagebrush (*Artemisia californica*), buckwheat (*Eriogonum fasciculatum*) and mulefat (*Baccharis salicifolia*).

Areas that have been subjected to varying amounts of grazing occur in both upland and bottomland areas in the lower and upper reaches. Dominant plant species vary within each grazed location, but usually include one or two of the following weedy invasive species: black mustard (*Brassica nigra*), ripgut brome (*Bromus diandrus*), and slender wild oat (*Avena barbata*) in areas of non-native grassland; somewhat dense stands of tree tobacco (*Nicotiana glauca*) in other areas; and occasional thickets of hoary cress (*Cardaria draba*) in association with castor bean (*Ricinus communis*) and purple star thistle (*Centaurea calcitrapa*).

Mulefat Scrub dominates in areas that are still subject to periodic inundation, with mulefat as the dominant species. Further west, near the levee, sand bar willow (*Salix hindsiana*) becomes co-dominant with mulefat. Riparian communities are present at various points along the northern edge of the proposed project area. Western sycamores form a Sycamore Alluvial Woodland near the eastern end of the upper reach where several tributary streams enter the main river channel. Central Coast Arroyo Willow Riparian Forest also occurs along the northern edge of the proposed project site in both the upper and lower reaches and in pockets within Kaiser Sand and Gravel's project area.

Along the southern boundary of the upper reach there are patches of Coastal Live Oak Woodlands. These communities occur as far west as Sisquoc Ranch in the upper reach. Remnants of Sycamore Alluvial Woodland consisting of a few isolated sycamores, coast live oaks (*Quercus agrifolia*) and Arroyo willows also are present in the upper reach in the vicinity of the Sisquoc Ranch.

Natural revegetation has occurred in previously mined and flood-scoured areas throughout the proposed project site. Areas that have been flood-scoured, or mined and then subsequently flood-scoured, revegetate with either native species to varying degrees depending on its location and compaction, or with non-native invasives such as tree tobacco. Areas that have been mined but not subsequently flood-scoured vary widely in extent and type of revegetation occurring. Areas with highly compacted soils do not support much shrub cover (in some cases only 5%) in contrast to areas where soils are not compacted where shrub cover can reach 65%. Native shrubs that occur in these areas include California sagebrush, coyote bush (*Baccharis pilularis*), scale broom, mock heather, California croton (*Croton californicus*) and deerweed (*Lotus scoparius*).

In the middle reach, several pits are present from prior gravel extraction by Kaiser Sand and Gravel. Vegetation in these pits ranges from invasive weedy plant cover to no vegetation. Three

of these pits have been inundated by groundwater and/or surface runoff during years with heavy rainfall. One such pit has a deep layer of fine-textured soil with a declining population of mulefat intermixed with invasive tamarisk (*Tamarix* sp.), tree tobacco and wild mustard (*Brassica* sp.). Another previously mined area with lower relief that has not received any channel overflows, but does receive dry-season agricultural runoff, also occurs in the area. This site has fine-textured soils in the lower areas of the excavation which support non-native species such as mustard and wild fennel (*Foeniculum vulgare*). The higher areas have coarser soils and support more native plant species. A flood channel excavated in 1975 which has subsequently been subjected to flooding and sediment deposition but has not been scoured, supports 100% native plant cover including cottonwood. This area also has fine-textured soils but does not inundate with groundwater and dry-season runoff. Areas that have both fine-textured soils and dry-season soil moisture seem to support invasive, nonnative species.

Vegetation on the Kaiser site consists mainly of barren wash, mulefat scrub mixed with alluvial scrub, isolated southern willow scrub, and disturbed area with ruderal vegetation. The river mining area includes barren wash and sparse mulefat scrub that tends to be regularly swept away by river flows. Vegetation above the ordinary high water mark along the banks is more dense mulefat/alluvial scrub.

Re-vegetation included in the Plan to reduce impacts on habitat and wildlife species is summarized in the tables below:

Table 10

COASTROCK HABITAT MITIGATION (Estimated Acreage)		
	SBCO	SLOCO
Jurisdictional Wetlands[1]	40	3
Willow Forest/Riparian[2]	75	13
Mulefat Scrub/ Herbaceous Scrub		
Channel Bottom[3]	384	133
Agricit. Pit Slopes[4]	189	20
Terrace&Levee Tops[5]	343	141

Notes:

1. Jurisdictional wetlands mitigation estimated to be 50% of inundation/detention basin area. Entire area would be seeded and/or planted.
2. Willow forest riparian mitigation estimated to be 50% of inundation/detention basin area plus 33% of channel side slopes Entire area would be seeded and/or planted.
3. Mulefat scrub in channel bottom would be allowed to revegetate naturally. Acreage assumed to equal 45% of channel bottom area as under existing conditions plus 67% of proposed channel side slopes. Channel side slopes would be seeded and planted.
4. Herbaceous scrub on Agricultural Pit slopes would be seeded.
5. A portion of Terrace & Levee Top acreage is undisturbed. Disturbed areas would be seeded and/or planted.

Kaiser Sand and Gravel Project Area Post-Reclamation Vegetation

Table 11

	Vegetation Association (acres)						
	Mulefat Scrub	Seasonal Native Meadow/Riparian	Variable Meadow/ Scrub	Willow Scrub Mitigation	Open Channel[1]	Undisturbed[3]	Total
Carranza Habitat Basin	25.4	54.1					79.6
Davis Habitat Basin	18.2	26.4					44.6
Little Lucy Habitat Basin	8.6	7.3					16.0
Siltation Pond							
Existing			15.7				15.7
Expanded	2.7		12.4				15.1
Subtotal							***30.8***
River							
Open River Channel[2]					73.5		73.5
South Bank	4.3			2.2	2.8		9.3
North Bank	3.7				4.0		7.7
Subtotal							***90.5***
Other Areas[3]	28.4						28.4
Undisturbed Areas[4]							110.2
Total	**91.4**	**87.8**	**28.1**	**2.2**	**80.3**	**110.2**	**400**

Notes:

1. Includes bank areas below 100 year flood plain and river channel
2. Includes mined areas only; open channel river areas in Ledges Unit included in "Undisturbed"
3. Includes disturbed lands outside of habitat basins, siltation pond, and mined river area
4. Includes areas not disturbed by mining activities, area roads to remain, areas with screening trees and shrubs

WILDLIFE

Sensitive animal species found within the plan area at the time of Plan approval include:

Fish

Arroyo Chub *(Gila orcutti)* - The arroyo chub is a California species of special concern and is a Federal species of concern.

Steelhead Trout (*O. Mykiss*) The anadromous variety of Steelhead Trout is a Federal endangered species. This species was not observed within the plan area (for a period of several decades) but could migrate through the plan area when conditions for anadromous fish migration are favorable.

Amphibians

Arroyo Southwestern Toad (*Bufo microscaphus californicus*) - The arroyo toad is a Federal endangered species and a California species of special concern.

Western Spadefoot Toad (*Scaphiopus hammondii*) - The western spadefoot toad is a Federal Species of Concern and a California species of special concern.

California Red-Legged Frog (*Rana aurora draytonii*) - The California red-legged frog is a California species of special concern and is listed as threatened by the Federal government..

Reptiles

Southwestern Pond Turtle (*Clemmys marmorata pallida*) - The southwestern pond turtle is a California species of special concern and Federal Species of concern

California Horned Lizard (*Phrynosoma coronatum frontale*) - The California horned lizard is a California species of special concern and a Federal Species of concern

Silvery Legless Lizard (*Anniella pulchra*) - The silvery legless lizard is a California species of special concern and a Federal species of concern..

Birds

Least Bell's Vireo (*Vireo bellii pusillus*) - Least Bell's vireo is a State and Federally listed endangered species.

Southwestern Willow Flycatcher (*Empidonax traillii brewsteri*) - Willow flycatcher is a federal and state listed endangered species

Black-shouldered Kite (*Elanus caeruleus*) - Black-shouldered kites are considered a California special animal.

Northern Harrier (*Circus cyaneus*) - Northern harrier is considered a California species of special concern.

Loggerhead Shrike (*Lanius ludovicianus*) - Loggerhead shrike is a California species of special concern.

California Yellow Warbler (*Dendroica petechia brewsteri*) - The yellow warbler is a California species of special concern.

Yellow-breasted Chat (*Icteria virens*) - Yellow-breasted chat is a California species of special concern..

Tri-colored Blackbird (*Agelaius tricolor*) - Tri-colored blackbird is a California species of special concern and a Federal species of concern.

Mammals

Pallid Bat (*Antrozous pallidus*) - The pallid bat is a California species of special concern

American Badger (*Taxidea taxus*) - The American badger is a California species of special concern

On the Kaiser Sand and Gravel site, limited suitable habitat exists for the California horned lizard, possibly the western spadefoot toad, arroyo chub and foraging for the loggerhead shrike, Copper's hawk, sharp-shinned hawk, northern harrier, prairie falcon, and ferruginous hawk. The yellow warbler and willow flycatcher have been observed in the project area during migration but are not known to breed onsite due to limited habitat. California red-legged frog were heard in the vicinity of Little Lucy Lake in a 1997 survey. One aquatic species, the arroyo chub, has been reported within the Kaiser Sand and Gravel project area.

BIOLOGICAL RESOURCE ISSUES

The effects of long-term mining operations on biological resources within and adjacent to the Santa Maria and Sisquoc Rivers must be carefully considered in terms of direct and in-direct removal of habitat and sensitive wildlife, fragmentation of wildlife habitat over extended periods of time, effects on wildlife migration, and effectiveness of mitigation to reduce these adverse effects. Control of the methods and sequence of mining also play an important role in preventing impacts on sensitive species and habitat. The dynamic nature of the river environment over time will lead to a constantly evolving mosaic of vegetation throughout the plan area with the potential for related changes in

wildlife movement patterns which could conflict with planned mining operations. These conditions underscore the importance of ongoing project review and monitoring to ensure that plan requirements are being implemented and conflicts between biological resources and mining operations are minimized. Providing incentives to encourage the mining operators to implement operations in a flexible manner to avoid impacts on biological resources will enlist mining operators into a partnership with the regulatory agencies to prevent unnecessary impacts on resources. The policies, implementing standards and plan requirements listed below are intended to address these issues.

Policy BIO-I (Periodic Review): Provide for periodic review and ongoing monitoring of biological resources within the project area to ensure compliance with Plan requirements and applicable Federal, State, and County performance standards.

Implementing Standards and Plan Requirements:

1) Prior to commencement of surface mining operations for Phase I and coinciding with renewal of each ACOE Section 404 permit after the initial commencement of mining (or every five years, whichever is less), the applicant shall submit a mining and reclamation plan (MRP) for the upcoming Section 404 permit period for review and approval by each applicable agency of jurisdiction. Said plan, and accompanying written project description, shall include the following elements:

   a) The specific extent of all biological resources within the area proposed to be disturbed shall be mapped by an agency approved Biologist/Wetlands Specialist based on an updated spring biological survey. Said mapping shall be provided as an overlay to the proposed mining plan.

   b) The written project description accompanying the mining plan shall include a specific biological resource impact assessment prepared by an agency approved Biologist/Wetlands Specialist. The impact assessment shall consist of an analysis of the feasibility of avoidance of said resources, a description of the extent and chronology of disturbance to said resources where avoidance is not feasible, a description of the specific mitigation (from the menu of measures included in the program EIR) proposed for disturbance of said resources, mitigation monitoring, contingency mitigation in the event that the proposed mitigation fails, and a description of the timing of implementation of mitigation.

   c) All areas proposed to be reclaimed during the permit period shall be indicated on the plans including the proposed end use, method and timing for completion of reclamation. Performance criteria for measuring the success of reclamation shall be indicated as part of the written project description and shall conform to the requirements of SMARA and all local implementing ordinances.

Policy BIO-II (Habitat Protection): Ensure that no net loss of habitat area, function, and value will occur as a result of mining and reclamation operations within the specific plan area.

Policy BIO-III (Habitat Avoidance/Replacement): Avoid impacts to sensitive biological resources where feasible. Where avoidance is not feasible, fully off-set any loss of function and value of any wetland, woodland, willow forest, and willow scrub habitat within any portions of the project area adversely affected directly or indirectly by mining operations.

Implementing Standards and Plan Requirements:

1) ***Avoidance***: To protect wetland resources, the applicant shall avoid all federally-delineated wetlands and willow riparian habitat to the maximum extent practicable.

2) ***Mitigation Ratio***: To mitigate for impacts on wetlands and willow riparian habitat that cannot be avoided, the applicant shall establish and maintain self-sustaining wetlands and willow riparian habitat in or adjacent to the river environment to offset the functions and values of the impacted habitat. Total self-sustaining, wetlands and willow riparian habitat in these identified mitigation sites shall be required to equal at least 1.5 times the area of wetlands and willow scrub removed or disturbed by mining and at least 3 times the area of riparian willow forest or oak woodland habitat removed or disturbed by mining on an ongoing basis throughout the life of the project. All mitigation at the specified ratios shall be provided in advance or concurrently with removal of wetland and willow riparian vegetation associated with approved mining.

3) ***Mitigation Plan***: Prior to impacting any wetlands and concurrent with submittal of the Periodic Mining and Reclamation Plan, the applicant shall prepare and submit a wetlands mitigation plan prepared by a Agency approved Biologist or Wetlands Specialist (using the "ACOE Habitat Mitigation and Monitoring Guidelines" as applicable) to the Counties and the ACOE for review and approval. Wetlands mitigation shall be implemented to the satisfaction of the Counties and the ACOE prior to disturbance of existing wetland habitat. The applicant shall include an assessment of existing and newly created federal wetlands in the annual mining/monitoring report to the ACOE and the Counties. All habitat mitigation shall comply with the standards of Section 3703, 3705, and all other applicable requirements of the State of California, Mining and Geology Board Reclamation Regulations.

4) ***New Habitat Protection***: Any new wetland, willow riparian or oak woodland habitat that develops in areas proposed to be mined, subsequent to the baseline mapping in the EIS/R for the initial mining permit, and which cannot be avoided by mining operations, shall be replaced at the mitigation ratios referred to above concurrently or in advance of disturbance by mining operations.

5) ***Native Tree Protection***: To protect existing native trees, the applicant shall have a tree protection and replacement program prepared by an Agency-approved biologist. The Agency approved plan and mitigation shall be implemented prior to disturbance of native trees in each Periodic MRP. An assessment of the tree protection and replacement program and its success shall be included in the annual mining/monitoring report.

Policy BIO-IV (Advance Mitigation): Require that adverse effects on biological resources shall be mitigated in advance or concurrently with impacts caused directly or indirectly by mining operations.

Implementing Standards and Plan Requirements:

1) ***Mitigation Bank***: To provide for advance mitigation of project impacts, a mitigation bank satisfying the requirements of the County and U.S. Army Corps of Engineers shall be established by Coast Rock within the project area. The size of the mitigation bank and the quantity and type of vegetation required shall be determined by the County and U.S. Army Corps of Engineers upon a site specific evaluation of detailed project mining plans. During the initial approved mining period, this basin shall be fully vegetated with wetland, riparian and herbaceous scrub species to the satisfaction of the County and the U.S. Army Corps of Engineers. Vegetation shall be maintained in this mitigation bank for the life of the project to provide advance mitigation to fully off-set removal or disturbance of wetland and willow riparian habitat in all areas designated under this Specific Plan for future mining.

Policy BIO-V (Progressive Reclamation): Conduct mining operations in-channel in a manner which allows for active and passive reclamation to occur concurrently with disturbance of in-channel resources.

Implementing Standards and Plan Requirements:

1) ***Channel Development***: No isolated, local in-channel pits shall be permitted. Mining within inundated areas of the channel shall not be permitted.

2) ***Mining Sequence***: The in-channel mining shall be done in a progressive, sequential manner by widening existing channel areas as excavation advances upstream and downstream.

3) ***Concurrent Reclamation***: Excavation shall occur in a manner that will allow for concurrent, ongoing reclamation to maximize habitat function and value throughout the life of the project.

4) ***Bank Protection***: Areas requiring hard bank protection as determined by the County Flood Control District and ACOE shall be revegetated by the applicant if feasible based on the method approved by the District and the ACOE. Bank protection techniques which allow revegetation to occur are preferred. Revegetation of protected banks shall utilize native, fast growing plants that will quickly cover the area and thrive in a rocky environment.

Policy BIO-VI (In-Channel Mining Phasing- Upstream from Tepusquet Crossing): Complete in-channel mining upstream from Tepusquet Crossing, as a goal, at the earliest opportunity to reduce temporal impacts from on-going in-channel mining and allow natural processes to begin to restore in-channel resources in this area in the early stages of the overall project.

Policy BIO-VII (In-Channel Mining Phasing- Between Garey Bridge and Kaiser Sand and Gravel): Complete in-channel mining operations in the Coast Rock project area upstream from the Garey Bridge, as a goal, within the term of any subsequent permit which the agencies may approve upon expiration of the initial project permit.

Implementing Standards and Plan Requirements:

1) **Upstream Phasing**: (Santa Barbara County): Any permit approved for the initial phase of mining and reclamation operations shall include, as a goal, completion of in-channel mining and revegetation of all affected channel side slopes upstream from Tepusquet Crossing, in accordance with the approved reclamation plan, within the first 10 years of the approved permit.

2) **Middle Reach Phasing**: (Santa Barbara County): Any permit approved for the second phase of mining and reclamation operations shall include, as a goal, completion of in-channel mining and revegetation of all affected channel side slopes upstream from Garey Bridge to the Kaiser Sand and Gravel project area, in accordance with the approved reclamation plan, within the term of the approved permit.

Policy BIO-VIII (Sensitive Species Protection): Reduce impacts on sensitive animal species through full coordination and compliance with the requirements of the California Department of Fish and Game and U.S. Fish and Wildlife Service.

Implementing Standards and Plan Requirements:

1) ***Alteration Agreement***: No alteration to stream channels, banks, creeks, and/or wetlands shall be permitted until a streambed alteration agreement is obtained from the State of California, Department of Fish and Game and any required permits are obtained from the U.S. Army Corps of Engineers pursuant to Clean Water Act requirements.

2) ***Sensitive Species***: Impacts on sensitive species shall be reduced through full implementation of the mitigation measures pertaining to sensitive species protection identified in the project EIS/R currently and as it may be amended through future review.

3) ***Noise Impacts to Birds***: To reduce potential noise impacts to sensitive bird species, the location of existing and proposed haul roads in relation to nesting sites of sensitive bird species shall be reviewed as part of each Periodic MRP. Where nesting is found to be occuring adjacent to haul roads, set backs between haul roads and sensitive bird nesting sites shall be required until any young birds have fledged, if determined to be necessary by the agencies to reduce potentially significant impacts. Any environmental impacts due to relocation of haul roads to satisfy these requirements shall be considered when establishing these setbacks.

4) ***Special Status Species:*** To protect species that may be listed as endangered or threatened (Federal or State) in the future, the applicant shall have a agency approved biologist conduct sensitive species surveys of areas approved for mining in the upcoming Periodic MRP. If future listed species are expected to be impacted by mining activities, the applicant shall demonstrate compliance with the ESA through a new Section 7 consultation with USFWS or a Section 10A

permit issued by USFWS, and/or consultation with the California Department of Fish and Game, whichever is appropriate. The biologist shall use USFWS-established protocol for surveying, if available. Any conservation measures and conditions required by USFWS shall be implemented to the satisfaction of the ACOE.

Policy BIO-IX (Protection for Resource Mitigation Sites): Provide long-term, permanent, protection of any areas within the project boundaries designated for biological impact mitigation through appropriate means such as easements, maintenance agreements, fencing, signage, or other means determined adequate and feasible by agency decision makers.

Implementing Standards and Plan Requirements:

1) ***Mitigation Sites***: Each biological mitigation/reclamation site designated for long-term protection by the Counties shall be set aside in perpetuity and maintained throughout the life of the project for its habitat value through the establishment of open space/conservation easements, deed restrictions, maintenance agreements, or other legal mechanism acceptable to the Counties.

2) ***Mitigation Bank Credits***: The mine operator's habitat restoration efforts may result in a net habitat gain at the conclusion of the project and upon completion of reclamation (net habitat gain is defined as more acres of habitat than required as project mitigation or, in the case of individual specimen trees, more individual trees than required for project mitigation, in existence following completion of reclamation than that existing at the time the mine operator commences operations under any County approved permit). Should a net habitat gain occur as defined above, and the mine operator has satisfied all requirements of project conditions of this permit, the mine operator may sell or transfer to other public agencies or County approved conservation entities mitigation banking credits from said net habitat gain on an acre for acre basis for each surplus acre (or portion thereof) and for each surplus tree subject to County approval of a revision to any implementing discretionary permits applicable to the project.

3) ***Sensitive Habitat Planning Area***: Designate all biological resource mitigation sites, all in-channel mining areas and the 100 to 200 foot wide wildlife migration corridor adjacent to the north and south banks of the rivers as "SH" (Sensitive Habitat) upon completion of mining and reclamation within each phase of the plan. Upon completion of mining and reclamation, these areas shall remain open space. Levee maintenance activities, irrigation and drainage facilities incidental to adjacent agricultural or mining operations, grazing, installation of bank protection subject to County review and approval, maintenance of access roads and/or trails, and similar repair and maintenance activities, or other minor improvements subject to review and approval by the County, may be permitted within this area.

Policy BIO-X (Wildlife Migration): Provide for a permanent, protected wildlife migration corridor adjacent to the banks of the rivers throughout the project area.

Implementing Standards and Plan Requirements:

1) ***Wildlife Corridor***: To provide a wildlife corridor through the project site, the applicant shall progressively provide a continuous, vegetated, 100-foot corridor in the form of the vegetated channel side slopes and banks. Final grading and planting of vegetation within this corridor shall take place as soon as the final depth and width of excavation has been reached within each completed mined area.

2) ***Buffer Area***: (San Luis Obispo County): To reduce indirect impacts to sensitive mulefat scrub habitat, Coast Rock shall establish a 200 foot wide buffer area (measured from the northernmost limit of mining operations) along the northern bluffs in the lower reach in San Luis Obispo County between mining operations and the bluffs. This buffer shall taper into a 100 foot wide continuous wildlife corridor between the channel and agricultural lands to the east referenced in item no. 1 above.

Policy BIO-XI (Habitat Avoidance Incentives): Provide incentives to the mining operators to avoid any new, in-channel habitat which may develop subsequent to each updated habitat delineation.

Implementing Standards and Plan Requirements:

1. ***Habitat Preservation Incentive***: If cumulative mitigation requirements described above are met, and a functional assessment, consistent with County and ACOE requirements, confirms that the habitat is self-sustaining and provides functions and values similar to existing habitats within the project area, any habitat existing within the project area upon expiration of this permit, in excess of that required as mitigation by project conditions, may be applied toward habitat mitigation requirements (on a like for like basis) for future phases of the project. The quantity, type and duration, of any credit granted shall be at the discretion of the County Planning Commission pursuant to County review of any subsequent discretionary permit for future project phases.

Policy BIO-XII (Fish Migration Protection): Prohibit placement of any barriers to fish migration within the river channel or any tributaries capable of supporting fish within the project area.

Implementing Standards and Plan Requirements:

1) ***Structures:*** Evaluate any subsequent permit requests for in-channel structures such as grade stabilization structures, drop structures, diversion facilities, haul road culverts, or similar structures to ensure that such structures are designed to accommodate fish passage.

2) ***Flowing Water:*** Prohibit mining operations within flowing waters of the rivers.

Policy BIO-XIII (National Gravel Extraction Policy Consistency): Conduct mining operations within the river channel consistent with the "National Gravel Extraction Policy" adopted by the National Marine Fisheries Service and attached as Appendix D.

Implementing Standards and Plan Requirements:

1) ***Permit Consistency Review***: Any permit requests for subsequent in-channel phases of the project shall be evaluated, if required through Section 404 permit processing, for consistency with the "National Gravel Extraction Policy", as amended.

Policy BIO-XIV (Cattle Grazing): Protect reclaimed habitat areas from damage by cattle grazing until vegetation is determined to be self-sustaining.

Implementing Standards and Plan Requirements:

1) ***Channel Banks***: All channel bank areas proposed to be actively revegetated shall be protected from livestock grazing if determined to be necessary by the County during and after planting until all plants are determined to be self-sustaining by the agencies or for a maximum of five years from initial planting, whichever period is shorter.

2) ***Off-Channel Basins***: Off-channel inundation and detention basins used as habitat mitigation sites shall be fenced to permanently prevent livestock grazing from occurring. Fencing shall be designed not to impede wildlife migration into protected habitat areas.

Policy BIO-XV (In-Channel Structures and Bank Protection): Any in-channel structures shall be designed to minimize disturbance to natural drainage patterns and native vegetation. Use of hard bank structures shall be avoided where feasible.

Implementing Standards and Plan Requirements:

1) ***Structures***: Outlet structures and grade control/stabilization structures shall minimize disturbance to the natural drainage and native vegetation. All proposed drainage devices and grade control/stabilization structures shall be placed in the least environmentally damaging locations.

2) ***Bank Protection***: Any bank protection installed within the project area shall be bio-engineered and designed to incorporate vegetation where feasible.

CHAPTER VII: AGRICULTURE

BACKGROUND

Within the Specific Plan area, approximately 1085 acres currently (or recently) in agricultural use will be directly affected by mining operations in the Coast Rock Project area. Approximately 91 acres of these lands are within San Luis Obispo County, with the remaining agricultural lands located in Santa Barbara County. In addition, approximately 72 acres of agricultural lands will be directly affected by mining operations in the Kaiser Sand and Gravel project area. The majority of these existing agricultural lands are under Williamson Contract. The bulk of these lands within the Coast Rock project area will not be mined until the latter phases of the project. At that time, mining is proposed to occur in coordination with replacement of existing crops, primarily vineyards.

Existing agricultural areas within the mining zone will remain in agricultural use until mining begins in each area. Coast Rock's mining operations within agricultural lands will be limited to not more than 3-4 acres of disturbed area per year within the boundaries of each parcel or group of parcels under Williamson Contract. The depth of excavation in off-channel agricultural lands will not exceed the elevation of the adjacent river thalweg and the final reclaimed elevation of the agricultural pits will be at least five feet above the final elevation of the adjacent river thalweg in order to minimize the potential for groundwater intrusion. Final interior slopes in reclaimed agricultural pits will be 4:1 with a minimum setback of 25 feet from the top of levee slope to any adjacent property line.

Reclamation of mined areas will be initiated immediately after extraction of aggregate materials in this 3-4 acre area. As the sand and gravel is progressively removed, the area will be returned to a productive agricultural condition by the placement of soil and subsoil, and by a sequence of soil enhancement measures. Agricultural reclamation will follow a sequence of steps starting with stripping of topsoil and subsoil, and ending with reestablished productive fields. As the topsoil and subsoil are removed, they will be directly transferred to and spread on a nearby, recently excavated site to eliminate the need for stockpiling and doublehandling. Soil depths vary in different zones of the Plan area and soil may have to be hauled from one location to another to achieve the specified reclaimed condition. In accordance with SMARA performance standards (Section 3707-3708 of the State Mining and Geology Board Reclamation Regulations) the post-reclamation productivity of reclaimed agricultural lands must at least equal their pre-mining productivity for two consecutive crop years upon completion of reclamation.

Upon completion of mining and reclamation within the Coast Rock project area, 1115.6 acres of agricultural land will remain in Santa Barbara County and 90.9 acres will remain in San Luis Obispo County. Consequently, within the Coast Rock project area, agricultural lands will increase by approximately 132 acres. Agricultural lands will comprise nearly 39% of the post-reclamation Coast Rock project area.

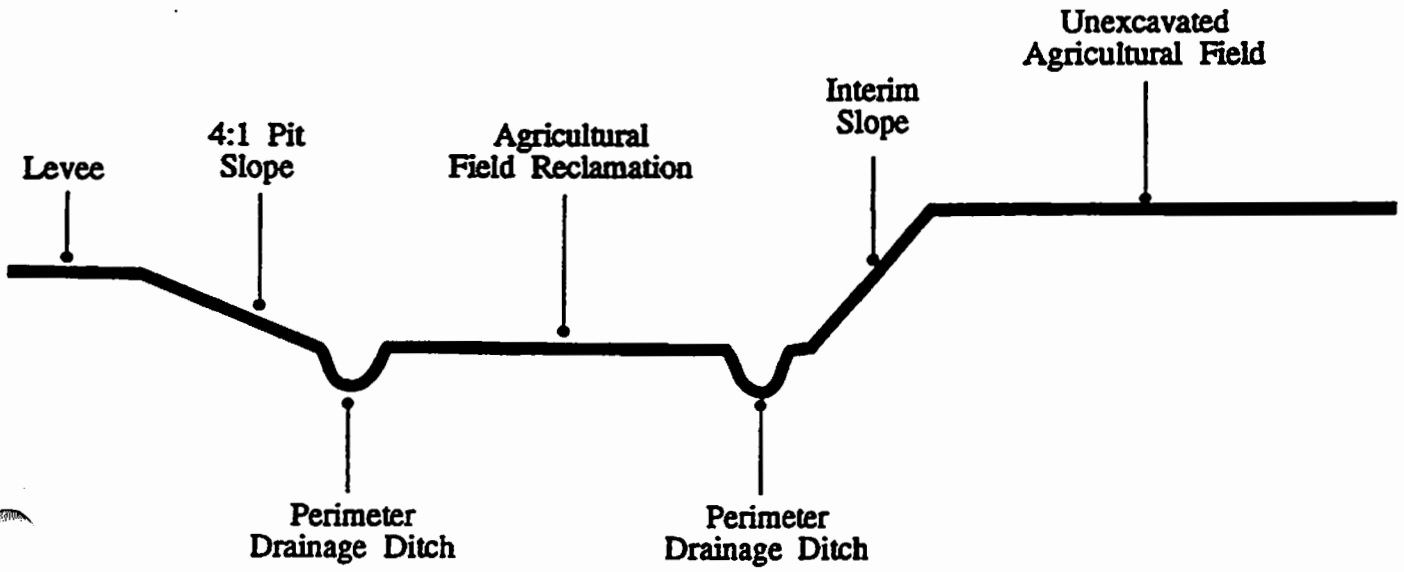
Kaiser Sand and Gravel will remove the existing 72 acres of agricultural land gradually over the estimated 23 year life of the project as mining progresses within each off-channel pit on the project site. The agricultural lands on the Kaiser site are not under Williamson Contract. Kaiser Sand and Gravel will not reclaim any agricultural land within its project area.

Erosion of Agricultural Lands Along the Sisquoc River

Upon completion of mining and reclamation by both Coast Rock and Kaiser Sand and Gravel, agricultural lands within the Specific Plan area will increase by approximately 60 acres.

AGRICULTURAL RESOURCE ISSUES

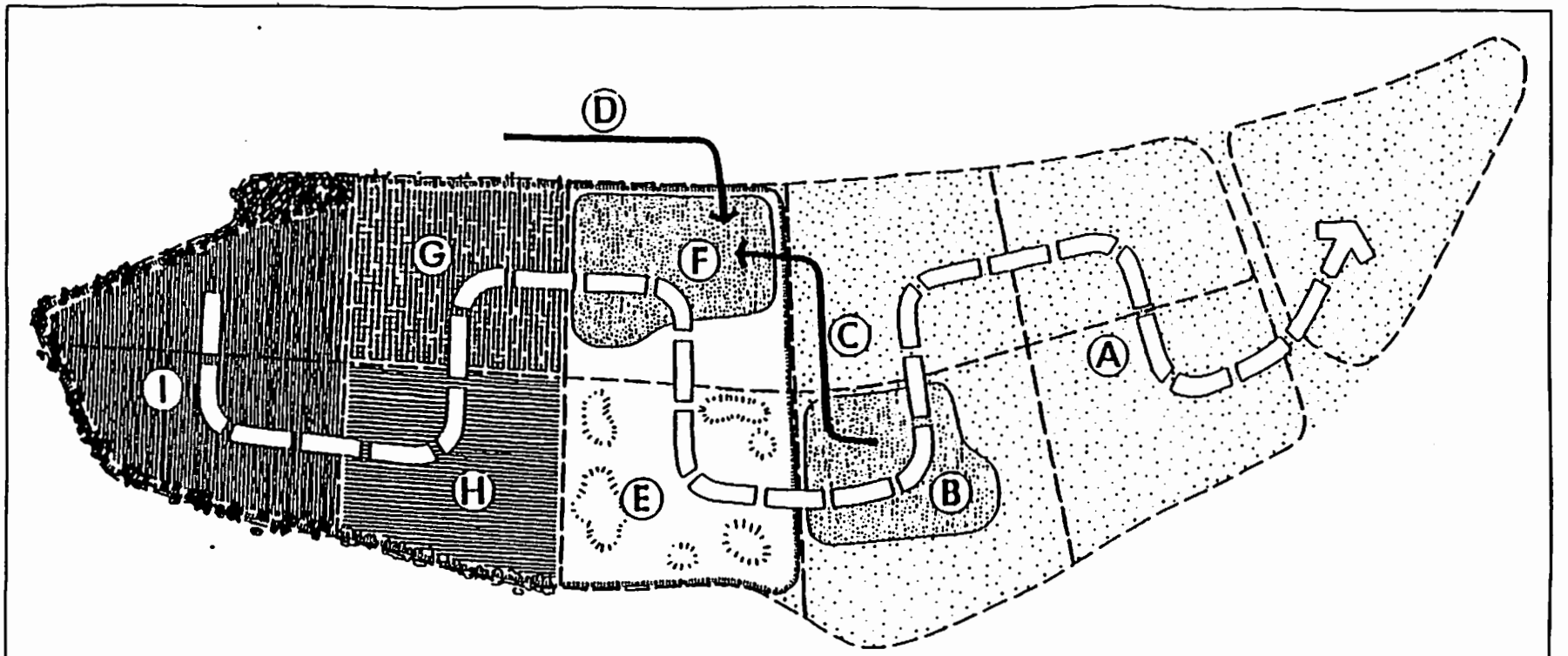
The policies and implementing standards below are intended to ensure that agricultural lands are properly reclaimed consistent with applicable SMARA performance standards to pre-mining or improved productivity levels with minimal disruption to existing, ongoing, agricultural operations in the project area. Coordination with area farmers and ranchers is empasized, as is limiting disturbance within any individual mining pit to minimize the area of agricultural land out of production during mining operations. Coordination of agricultural reclamation efforts between mining operators is also encouraged. Compliance with Williamson Act Agricultural Preserve Requirements is required and provisions for periodic review are established.



San Luis Obispo County

Santa Barbara County

Figure 29
Agricultural Pit Cross Section



Legend:

- (A) Existing land condition
- (B) Land stripped of overburden/soil prior to excavation
- (C) Transfer of overburden/soil to previously excavated land
- (D) Import of soil to previously excavated land
- (E) Land being actively excavated for aggregate material - 20 acres or less at any time
- (F) Previously excavated land regarded with restored soil and sloped for optimum surface drainage
- (G) Restored land undergoing soil conditioning by growing interim crop after adding organic material - slopes planted with native species for wildlife habitat
- (H) Land returned to agricultural use
- (I) Land fully reclaimed to agricultural productivity

SOURCE: Bissell & Karn.

San Luis Obispo County

Santa Barbara County

Figure 30
Agricultural Pit Mining/Reclamation Sequence

Santa Maria & Sisquoc River Specific Plan

Reclaimed Agricultural Lands Along the Sisquoc River Near Sisquoc Winery

Policy AG-I (Periodic Review & Monitoring): Provide for periodic review and ongoing monitoring of agricultural reclamation activities to ensure compliance with Plan requirements and applicable performance standards.

Implementing Standards and Plan Requirements:

1) ***Periodic Review***: Prior to commencement of surface mining operations for Phase I and coinciding with renewal of every other ACOE Section 404 permit after the initial commencement of mining, the applicant shall submit a mining and reclamation plan (MRP) for the upcoming Section 404 permit period for review and approval by each applicable agency of jurisdiction.. Said plan, and accompanying written project description, shall include the following elements:

   a) The specific extent of all existing agricultural lands, including soil type, depth, description of soil horizons, previous crop history, and other applicable indicators of soil productivity, within the area proposed to be disturbed shall be mapped and described in a report by an Agency approved soil scientist. Said mapping shall be provided as an overlay to the proposed mining plan.

   b) The written project description accompanying the mining plan shall include a specific agricultural resource impact assessment prepared by an Agency approved soil scientist.

   c) All areas proposed to be reclaimed during the permit period shall be indicated on the plans including the proposed end use, method and timing for completion of reclamation. Performance criteria for measuring the success of reclamation shall be indicated as part of the written project description and shall conform to all applicable requirements of SMARA, including Sections 3707 and 3708 of the State Mining and Geology Board Reclamation Regulations pertaining to reclamation of agricultural lands, and all local implementing ordinances, as amended.

Policy AG-II (Agricultural Reclamation Plan): The reclamation program for lands designated for agricultural use upon completion of mining shall include, but not be limited to, the following elements:

A. Provide for no net loss of cultivated agricultural lands within the overall Plan area.

B. Limit mining depth in off-channel areas to reduce the potential for exposure of groundwater and saturation of agricultural soils.

C. Protect existing and reclaimed agricultural lands along the river channel from erosion by implementing the proposed channel design.

D. Provide a finished grade in agricultural reclamation areas to the specification of the owner/farmer and County Flood Control District to allow for adequate site drainage.

E. Specify appropriate soil handling/management techniques to minimize losses in soil productivity.

Implementing Standards and Plan Requirements:

1) ***Agricultural Reclamation***: To eliminate impacts to or loss of agricultural resources, Coast Rock shall comply with reclamation, financial assurance, and monitoring procedures within the proposed Specific Plan and the Habitat and Agricultural Reclamation Program (Wesco 1992), which shall be designed to meet SMGB Reclamation and Performance Standards for Prime and Other Agricultural Lands as set forth in PRC, Article 9, §3707 and 3708 of SMARA and County Ordinance 4098. In addition, agricultural land reclamation shall include the following elements:

   a) To facilitate sufficient surface drainage, the finished grade of off-channel pit bottoms shall be 1 to 2 percent slope with perimeter drainage swales and on-site retention areas as determined to be necessary by P&D in consultation with the Santa Barbara County Flood Control District.

   b) Excavation depth shall be limited to maintain sufficient soil depth above the mean high groundwater level. The maximum finished depth of the pit bottom shall be at least five feet above the elevation of the thalweg of the adjacent river bed unless the site-specific suitability of increased depth can be established to the satisfaction of the County.

   c) Excess topsoil and subsoil shall be transferred as necessary from one portion of the pit to another or from one pit to another to achieve adequate soil depths.

   d) Wash-fines shall be mixed with available soils when necessary to supplement post-mining soil conditions. This material shall be conditioned and rehabilitated after application to bring soils up to pre-mining productivity levels

   e) Long-term storage and delayed replacement of soil shall be avoided by immediately applying soil to reclamation areas whenever feasible.

   f) Excess handling and transport of topsoil and subsoil shall be avoided.

   g) Compaction of topsoils shall be avoided by working with soils only when friable.

Policy AG-III (Soil Productivity): Require the productivity of post-mining/reclamation soils designated for agricultural use to be at least equivalent to the productivity of pre-mining soils within the project area.

Implementing Standards and Plan Requirements:

1) ***Soil Productivity Monitoring***: Reclamation of agricultural land shall be carefully monitored. Monitoring shall include soil sampling before excavation, and during and after soil conditioning, to allow for assessment of future crop production compared to pre-mining conditions. If any indications are apparent that reclamation is not succeeding, further mining in agricultural lands shall be suspended until such time as the problem is successfully resolved to the satisfaction of

the County. Reclamation shall be deemed successful when the productivity is equivalent to or exceeds, for two consecutive crop years, that of the pre-mining condition or similar crop production in the area.

Policy AG-IV (Topsoil Conservation and Wash Fine Disposal): Preserve the productivity of existing topsoil to the maximum extent feasible by carrying out the process of agricultural soil reclamation concurrent with mining operations to minimize the amount of time that any topsoil will need to be stockpiled. Prevent any mine waste fines used in agricultural land reclamation from being deposited in the river channel.

Implementing Standards and Plan Requirements:

1) ***Topsoil Handling***: To conserve topsoil, topsoil shall be removed and segregated by defined soil horizons (if present), temporarily stored, and reconstructed in proper sequence for use in soil reclamation in accordance with all applicable SMARA requirements, including Section 3711 (Topsoil Salvage, Maintenance, and Redistribution) of the State Mining and Geology Board Reclamation Regulations. Long term storage (defined as 12 months or more), excess handling, and compaction shall be avoided to reduce nutrient loss.

2) **Topsoil Handling**: (San Luis Obispo County): To reduce potential significant impacts due to loss of prime agricultural lands, the mine operator shall remove and segregate topsoil by defined soil horizons (if present) from the 91 acre field under San Luis Obispo County jurisdiction. Prior to commencement of mining, this soil shall remain in the agricultural reclamation area. If storage of soils is necessary, such storage shall only occur subject to the review and approval of the County to ensure that all available measures are taken to maintain the productivity of the soils during storage for later use in project reclamation efforts.

3) ***Fines***: In order to prevent any increase in turbidity, fines not used in ongoing agricultural reclamation shall be disposed of outside the floodplain where they cannot be washed back into the river. Fine disposal sites shall be indicated on the Periodic mining plans which will be submitted to each agency with permit jurisdiction for review and approval.

Policy AG-V (Williamson Act & SMARA Consistency):

A. Provide for County Agricultural Preserve Committee review of any future mining and reclamation operations on lands under Williamson Contract.

B. Minimize the area of land disturbed annually by mining for agricultural lands under Williamson Contract and provide for sequential reclamation of disturbed agricultural lands concurrently with mining operations.

C. Coordinate mining on agricultural lands closely with the owners/farmers to prevent adverse effects on ongoing agricultural operations in areas where mining is occurring.

D. Require conformance to SMARA performance standards governing agricultural soil reclamation

Implementing Standards and Plan Requirements:

1) ***Williamson Act Consistency***: Prior to commencement of mining for any Periodic MRP which includes disturbance of lands under Williamson Contract, the Periodic MRP shall be considered by the County Agricultural Preserve Advisory Committee to confirm consistency with the County's Williamson Act Agriculture Preserve Program. Any revisions to the location, sequence, or extent of mining in areas under Williamson Contract recommended by the Committee to ensure consistency with Contract requirements shall be incorporated into the Periodic MRP.

2) ***Coordination with Agricultural Production***: Mining operations shall be coordinated closely with property owners to ensure that necessary fencing, water lines/wells and access roads used for ongoing agricultural operations remain as required by the property owner for all properties under Williamson Act Contract. Evidence of coordination with, and approval by, the property owner shall be provided to the Agricultural Preserve Committee during its review of each Periodic MRP.

3) ***Disturbance Limitation***: Areas disturbed by mining shall be limited to 3-4 acres of excavated area per year per Williamson Act Contract.

4) ***Reclamation Sequence***: Reclamation of disturbed agricultural lands shall occur sequentially immediately following initial excavation such that agricultural productivity, equivalent to pre-mining, baseline conditions, is restored in conformance with SMARA performance standards for reclamation of agricultural lands (Sections 3707, 3708).

Policy AG-VI (Coordination between Mining Operators): Coordinate agricultural reclamation between Coast Rock and Kaiser Sand and Gravel such that unused topsoil from Kaiser Sand and Gravel operations is provided to Coast Rock for use in agricultural reclamation efforts.

Implementing Standards and Plan Requirements:

1) ***Topsoil Sharing for Reclamation*** (Santa Barbara County): To reduce potential significant impacts due to loss of prime agricultural lands, Kaiser Sand and Gravel, Inc. shall remove and segregate topsoil by defined soil horizons (if present) from the 72 acre field. Concurrently with removal, this soil shall be delivered to the nearest off-channel agricultural/habitat reclamation area within the Coast Rock project for use in reclamation efforts (Hansen/St. Claire/Bognuda Pits). If temporary storage of soils is necessary, such storage shall only occur subject to the review and approval of the County to ensure that all available measures are taken to maintain the productivity of the soils during storage for later use in project reclamation efforts.

CHAPTER VIII: GROUNDWATER RESOURCES

BACKGROUND

The Santa Maria Groundwater Basin (SMGB) is currently the primary source of water supply for the agricultural, municipal, and industrial land uses in the cities and counties within Santa Maria Valley. The basin is located in the northwest portion of Santa Barbara County and the southwest portion of San Luis Obispo County. Generally, the basin is bordered by Nipomo Mesa to the north, San Rafael Mountains to the east, Casmalia and Solomon Hills to the south and the Pacific Ocean to the west. The basin trends northwesterly and covers an area of approximately 200 square miles. A majority of the Specific Plan area overlies the SMGB; therefore, the effects of mining operations in this area on these significant groundwater resources are addressed in this Plan.

The Santa Maria River system drains the Santa Maria Valley and extensive areas to the north and east. The river system includes the Cuyama River and the Sisquoc River. These two rivers merge at Fugler Point (in the Specific Plan area) to form the Santa Maria River which flows westward to the ocean. The watershed of the Cuyama River is approximately 1,130 square-miles in size and includes the north slope of the Sierra Madre Mountain Range and the south slope of Caliente Mountain Range. Huasna and Alamo Creeks, located north of Twitchell Reservoir, drain into the Cuyama River. The Sisquoc River drains an approximately 471 square-mile watershed consisting of the south and west slopes of the Sierra Madre Mountain Range, and the north slope of the San Rafael Mountain Range. Seepage of river flows through the river bed along the Santa Maria River and along the lower reaches of the Cuyama and Sisquoc rivers is the primary source of recharge to the SMGB. These segments of the Santa Maria River system flow over unconsolidated, permeable alluvial deposits of the SMGB. Percolation of river flows through these deposits account for approximately 75-85% of the 83,800± AFY average annual recharge to the groundwater basin. The remaining recharge occurs through direct percolation of rainfall.

A significant portion (about 20,000 AFY) of the groundwater recharge attributable to river bed seepage is due to the operation of Twitchell Reservoir. This facility, constructed in 1959, is located 7.7 miles north of Fugler Point on the Cuyama River. Twitchell Dam serves as a flood control and water conservation reservoir for the Santa Maria Valley. During the dry months, reservoir water is released to recharge the SMGB. The water from Twitchell Reservoir is released in a controlled manner such that all of the released water seeps into the bed of the Santa Maria River prior to the flows reaching the Pacific Ocean.

Discharge from the SMGB occurs through pumpage and through outflow to the Pacific Ocean. The general trend of groundwater flow from the Sisquoc and Cuyama River convergence is northwesterly to the Pacific Ocean. The groundwater within the Santa Maria Valley Basin is unconfined and hydraulically connected through the unconsolidated deposits, except for an area in the west where groundwater is confined by overlying silts and clay.

The Santa Maria Groundwater Basin is physically comprised of generally unconsolidated, water-bearing, marine and non-marine sediments of Pliocene to Recent age. These deposits are up to 2300 feet thick and overlie consolidated bedrock of Jurassic to Miocene age. The consolidated bedrock units are generally considered non-water bearing as wells in these units are characterized by low production rates and poor water quality.

Water-bearing unit in the SMGB include, from oldest to youngest, the Careaga Sand, Paso Robles Formation, Orcutt Formation and Holocene alluvial deposits. Although all of these are productive, the main water-bearing units are found in the Holocene alluvial sediments. These sediments extend from Fugler Point in the Specific Plan area to the Pacific Ocean and underlie a majority of the SMGB. The Holocene sediments range in thickness from 50 feet on the east to 230 feet in the west. Wells in these permeable alluvial deposits commonly produce at rates on the order of 1000 gallons per minute. The Holocene alluvial deposits include the river channel sediments which are the object of the proposed mining activities.

The table below summarizes existing and anticipated effects on groundwater resources from mining and reclamation operations within the Plan area.

Table 12

Groundwater Use Summary for Specific Plan Area

Existing consumptive water use for aggregate production in Plan area (AFY)	Project related net change in consumptive water use (AFY) in Plan area [(-) = decrease)]
302	0-23 years: 37 24-64 years 68 Residual: (- 3)

Source: Final EIS/R Santa Maria/Sisquoc River Specific Plan

GROUNDWATER RESOURCE ISSUES

The effects of long-term mining operations on groundwater resources within the Santa Maria Groundwater Basin (SMGB) must be carefully considered in terms of direct and in-direct effects on groundwater recharge as a result of mining and reclamation. Any effects that mining may have on groundwater quality must also be considered.

A number of variables related to the mining and reclamation operations included in the Plan interact to affect groundwater resources: Mining depth, mining width, mining sequence/progression, increases in

production of aggregate products, end uses proposed for final reclamation, relationships between mining depth and the average water table elevation, evaporation of groundwater exposed by mining, exposure of groundwater in mining pits to contamination from outside sources. Through the environmental review process, a mining and reclamation plan was developed, recognizing the interactions among these variables, so that any project effects on groundwater resources will not be significant. This mining and reclamation plan, adopted as part of this specific plan, limits mining depth in-channel and off-channel in relation to the elevation of the existing river thalweg for the Coast Rock project. Mining depth for the Kaiser project is based on designated "red line" elevations. This plan also provides for the gradual widening of the existing pilot channels created within the flood plain as a result of past mining and flood control activities to maximize available spreading area for groundwater recharge. Existing water recycling at the aggregate processing facilities within the plan area is encouraged to continue by this plan. A mix of post-mining end uses similar to what existed before implementation of the plan is included as a feature of this plan in order to reduce new groundwater effects from reclaimed lands.

The potential for using reclaimed mined areas to enhance groundwater recharge and water quality also warrants further consideration given the long term nature of this plan. In this context, public/private partnerships to address groundwater resource management issues should be encouraged. Finally, the effectiveness of the project design to minimize effects on groundwater recharge must be reviewed and evaluated on an ongoing basis.

The policies, implementing standards and plan requirements listed below are intended to address these issues.

1) ***Policy WATER-I (Groundwater Recharge Enhancement)***: Allow reclaimed mined lands to be used to enhance groundwater recharge where feasible. The potential benefit to groundwater quality from groundwater recharge at the Kaiser Sand and Gravel site should be considered by the County if such recharge facility proves to be feasible.

Implementing Standards and Plan Requirements:

1) **Kaiser Groundwater Recharge** (Santa Barbara County): Kaiser Sand and Gravel, or any subsequent mine operator at the Kaiser site, may submit an amendment to the approved conditional use permit and reclamation plan for consideration by the County to convert the end use of its mining pits from open space/wildlife habitat to groundwater recharge. Any amendment requests submitted by the mine operator must establish the feasibility of using these pits for groundwater recharge and must address the following issues:

   a) Public safety;

   b) Compliance with California Division of Safety of Dams regulations;

   c) Compliance with California Division of Water Rights regulations;

d) Compliance with applicable SMARA performance standards;

e) Obtaining all applicable permits and approvals from public agencies with jurisdiction including, but not limited to the U.S. Army Corps of Engineers, California Department of Fish and Game, U.S. Fish and Wildlife Service, National Marine Fisheries Service;

f) Design and operation of the diversion facility to minimize adverse environmental effects, including, but not limited to effects on: river morphology, sediment transport, fish migration, potential downstream effects on aquatic resources;

g) Funding for construction, operation, and long-term maintenance;

h) Acquisition of any off-site property necessary for completing the recharge facility;

i) Identification of a facility operator;

j) Mitigation of any potentially significant impacts associated with construction and operation of the recharge facility;

2) **Kaiser Reclamation Plan Amendment for Recharge** (Santa Barbara County): Any amendment submitted to change the end use of the Kaiser Sand and Gravel mining pits from open/space and wildlife habitat to groundwater recharge will require project-specific environmental review in conjunction with a major revision to the project conditional use permit and reclamation plan. An amendment to this Specific Plan will not be required unless the proposed recharge facility would not be consistent with the goals, policies, implementation standards and plan requirements of the Specific Plan as determined by the County.

Policy WATER-II (Groundwater Quality): Maintain and enhance the quality of groundwater in coordination with mining and reclamation operations.

Implementing Standards and Plan Requirements:

1) ***Off-Channel Pit Depth***: Final grade elevations for off-channel pits intended to be reclaimed for agricultural use shall be at least five (5) feet above the elevation of the adjoining river thalweg unless appropriate studies indicate that a greater depth would not increase the potential for adverse impacts on ground water quality or agricultural viability.

2) ***Safety/Spillage***: Appropriate fencing, berms, landscaping and similar barriers shall be placed around mining pits to deter unauthorized access and accidental spillages of hazardous materials where the depth of the pits is such that groundwater is expected to be exposed for prolonged periods.

3) ***Storm Run-off***: Mining and reclamation plans for off-channel pits shall be designed to provide for drainage in conformance with applicable, SMARA, Regional Water Quality Control Board and

County Flood Control District standards. The County shall review detailed grading and drainage plans for the mining pits to ensure that adequate provisions for drainage are included.

Policy WATER-III (Public/Private Partnerships): Encourage partnerships between public agencies and the mining operators within the Specific Plan area to constructively manage the water resources of the Santa Maria basin for public benefit.

Policy WATER-IV (Residual Project Water Demand): Minimize any net, post-mining, residual increase in groundwater demand within the Specific Plan area as a result of mining and reclamation operations approved by this Plan.

Policy WATER-V (Groundwater Recharge Interference): Conduct mining operations within the river channel in a manner which will not physically interfere with groundwater recharge within areas that overlie the Santa Maria Groundwater Basin.

Implementing Standards and Plan Requirements:

1) ***Cooperation with Groundwater Management Agencies***: Any County permits issued for mining operations within the river channel shall provide a mechanism for the mining operators within the Plan area to cooperate with any potentially affected or interested water management entity, including the Santa Maria Valley Water Conservation District, which is seeking to identify potential groundwater recharge, water quality or other groundwater benefits that may be available within the Specific Plan area by providing available resource information to the water management entity and by considering proposals to amend or modify the approved plan to achieve such benefits; provided that any proposed amendment or modification is consistent with the project purpose and with any applicable environmental standards, including Section 404 of the Clean Water Act and the California and Federal Endangered Species Acts. However, the mining operators are not obligated to amend or modify their approved plan at the request of the water management entity.

2) ***Channel Design***: A County approved, phased mining plan to gradually increase the depth and width of the existing river thalweg to facilitate ongoing reclamation and create a conveyance channel designed to allow waters (from the rivers or from Twitchell releases) to spread over the entire width of the channel to facilitate groundwater recharge shall be implemented by the mining operators. Implementation of this Plan is intended to minimize the potential for the project to interfere with groundwater recharge within the area downstream from the Cuyama/Santa Maria River confluence ("the area") consistent with the recommendations included in the evaluation of project groundwater impacts in the Final EIS/R.

3) ***Avoid Interference with Twitchell Reservoir Releases***: The mining operators shall conduct surface mining operations in the area downstream from the Cuyama/Santa Maria River confluence pursuant to the approved plan in such a way as to not physically interfere with releases of water form the Twitchell Dam Project, including releases the Santa Maria Valley Water Conservation District may make as part of a groundwater recharge program, and/or to cause substantially greater impacts on groundwater resources than identified in the Final EIS/R.

4) ***Santa Maria Valley Water Conservation District Plan Review***: The agencies (Santa Barbara County, San Luis Obispo County, U.S. Army Corps of Engineers) shall submit a complete copy of

each Periodic MRP submittal for the area downstream from the Cuyama/Santa Maria River confluence to the Santa Maria Valley Water Conservation District (the "District") for comment. Any written comments received by the agencies from the District within 30 days of receipt of each Periodic MRP (or any longer period mutually agreed upon by the District and the agencies), shall be considered by the agencies in making findings for approval of each Periodic MRP.

5) ***Findings for Approval of Periodic Mining and Reclamation Plans***: Prior to approving each Periodic MRP, the agencies must find that implementation of the proposed mining plan will not physically interfere with releases of water from the Twitchell Dam Project, including releases the District may make as part of a groundwater recharge program. The agencies must also find that the proposed mining will not cause significant adverse environmental impacts on groundwater resources substantially greater than indicated in the Final EIS/R. Conformance with the approved master plan is presumed to prevent interference with releases of water into the area and to result in impact levels consistent with those identified in the Final EIS/R.

6) ***Permit Review Authorized***: If substantial evidence in the form of verifiable scientific analysis, is presented to the agencies by any interested party indicating that any proposed in-channel mining in the area would physically interfere with said water releases or cause significant adverse impacts on groundwater resources substantially greater than indicated in the Final EIS/R, the agencies may refer the permit as it applies to this area to the Planning Commission for further review. As a result of this review, the agency decision-makers may require modifications of the location, duration, depth or width of mining in this area to prevent interference with water releases or any other unanticipated significant impacts on groundwater resources.

7) ***Mining Plan Implementation***: In-channel mining shall be conducted according to the County approved master mining and reclamation plan in a manner which shall minimize impacts on sediment transport and groundwater recharge throughout the river. No isolated, local in-channel pits shall be permitted. Mining within innundated areas of the channel shall not be permitted. The in-channel mining shall be done in a progressive, sequential manner by widening existing channel areas as excavation advances upstream and downstream.

Policy WATER-VI (Recycling): Encourage continuing recycling of water used in aggregate processing operations.

Implementing Standards and Plan Requirements:

1) ***Water Recycling***: The County shall review applications for mining permits within the Plan area to ensure that water used for aggregate processing continues to be recycled.

CHAPTER IX: CULTURAL RESOURCES

BACKGROUND

The Specific Plan area includes approximately 12 miles of bottomland and river channel along the Santa Maria and Sisquoc Rivers. The aggregate deposits under consideration for mining extend from the Bradley Ditch upstream to the Sisquoc River approximately one half mile upstream from Sisquoc Ranch. Much of the area, outside of the river channel is presently used as agricultural land, primarily crop farming with some parcels set aside for cattle grazing. Other areas contain pockets of wild riparian plant and animal communities. The natural soil deposits of the project area range from sandy silt topsoil to river bottom gravel deposits. The geology of the project area is described as Pleistocene and Holocene in origin composed primarily of recent alluvium and terrace deposits: unconsolidated and semi-consolidated gravels sands and silts.

At least two noteworthy historical events occurred in the proposed Specific Plan area. The first took place in 1846. It was at this time that the famous Fremont expedition passed through on its way from San Luis Obispo to Santa Barbara. Fremont's forces followed the Santa Maria and Sisquoc Rivers to Foxen Canyon where they turned south and, guided by Benjamin (Julian) Foxen, came to the south coast by surprise through the San Marcos Pass and claiming Santa Barbara for the United States without bloodshed. A second place of historical interest immediately adjoining the project area is Fugler's Point. This was the location of a ranch owned by Francis F. and Elizabeth Fugler and, in 1872, the birthplace of their son, Arthur. Arthur Fugler grew up to become a prominent citizen in the valley and the first official "mayor" of Santa Maria in 1927

The background research and field investigations conducted for the Specific Plan project area also identified two historic period archaeological sites.

Site SBa-2545H

Site SBa-2545H is located in the upper reach portion of the project area in a fallow field north of Foxen Canyon Road between Foxen and Olivera Canyons in Santa Barbara County. The site consists of a scattered historic trash deposit covering approximately 2,906 square meters. The deposit is composed of various household and building debris reported to date from the late 1800s. Among the artifacts noted were various ceramic pieces (mostly broken plates), glass shreds from bottles and window panes, metal can fragments, and pieces of milled wood. Food remains including marine shell and pieces of sawed cow bone were also present. Earlier research suggested that this historic deposit may have been associated with the "Goodchild" homestead that is believed to have been located nearby and initially occupied during the late 1800s.

Further analysis carried out as part of the environmental review process for this Plan indicates that the temporally diagnostic artifacts discovered among debris found at the site suggest that the former structure had probably existed sometime between the 1920s and the 1940s and did not date to the 1880s as suggested by earlier research. The owner of the house was identified by the neighbors as

Ralph Goodchild. However, this is not to imply that it was the Goodchild Homestead as suggested by Singer and Associates (1992). The location of the much earlier homestead structure was located farther to the north of SBa-2545H and nearer to the Sisquoc River beyond the project area.

The initial evaluation prepared by Singer and Associates (1992) concludes that this historic site does not appear to meet either the significance criteria of eligibility for inclusion on the National Register of Historic Places or the CEQA criteria of archaeological resource uniqueness. Singer and Associates (1992) do note that "*a strong argument can be made that a controlled subsurface archaeological excavation of this deposit could yield important information regarding the lifeways and means of the early historic inhabitants of the region, under current Santa Barbara County Cultural Resource guidelines.*" A reevaluation of the cultural materials noted on the site surface as part of the Specific Plan review process indicated that the SBa-2545H appears to be considerably more recent in age and likely represents the household and construction debris from a former ranch house that was destroyed by fire. Given the recent age (less than 100 years), and lack of clear association with a significant person or family in the Santa Maria Valley, it is highly unlikely that any intact subsurface cultural features associated with this site would be significant under current Santa Barbara County Cultural Resource guidelines.

Site SLO-1537H

Site SLO-1537H is located on the north side of the Santa Maria River within San Luis Obispo County. It is situated on an alluvial terrace approximately 300 feet north of the confluence of the Sisquoc and Cuyama Rivers where the Santa Maria River begins. The site consists of an early 1900s windmill and water pump that was probably associated with the cattle operations of the Rancho Tepusquet. Features and artifacts observed at the site include the remains of two windmills and associated gears and fittings, a concrete water trough, an old barbed wire fence that lines the western border to the site, miscellaneous rusted farm equipment, and a metal water tank. One of the windmills, though disconnected to the pump, is of relatively recent manufacture and can be generally described as a metal frame and wheel windmill produced by the "Aeromotor" company. The second windmill has been at least partially dismantled to allow replacement by the newer model just mentioned. The second, older windmill had a wheel and wooden frame with a "Flint & Walling Mfg. Co." label on the gear box. SLO-1537H is identified on the current 7.5' USGS Twitchell Dam Quadrangle map by a windmill symbol located just below the confluence of the Cuyama and Sisquoc Rivers.

The importance of a windmill powered water pump to supply water to cattle is not a resource that would be eligible for inclusion on the National Register of Historic Places nor would it be eligible for preservation under CEQA or current Santa Barbara County Cultural Resource guidelines. The research potential for an above ground cultural resource of this type appears to be quite limited.

PREDICTED CULTURAL RESOURCE TYPES

The regional study area is rich in historic cultural resources which represent various phases of its history and economic development. The earliest Euroamerican sites are the landing points described in the diaries of the early Spanish explorers and traders who plied California's coastal waters in the

sixteenth and seventeenth centuries. Due to the poor local environment and extreme distance to neighboring missions, the Mission Period is not well represented in the area. Local cultural resources from this period are limited to less visible features today such as trade routes and roads linking the mission-related developments to the north and south.

Typical historic resources representative of the "Rancho Era" are adobe residences, livestock-related facilities and artifacts, and early roads and trails that connected the central rancho headquarters with major points of transshipment by land or sea. Settlements of this era tended to be irregularly distributed across the landscape and often situated in sheltered areas near permanent sources of water. A number of outlying facilities such as temporary camps and holding pens were used seasonally to effectively manage livestock operations. This general pattern persisted for all of the land grants included in the project area.

From the beginning of the "American Period" and into the 20th century typical historic resources include wooden residences, schools, farms and numerous structures used for farm and ranching purposes. Also evident are structural remains associated with early oil development and railway transportation. Historic cultural resources of this era are frequently recognized by old building foundations, trash dumps, abandoned farm and oil production machinery, railway beds, and conspicuous rows of introduced cypress and eucalyptus trees which once served as windbreaks for agricultural fields in the region.

RESOURCE SIGNIFICANCE

Resources are considered significant, pursuant to Federal criteria (36 CFR Part 60.6), if at least 50 years old and that the quality of significance in American history, architecture, archeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and, in addition, satisfy the following criteria:

a) That are associated with events that have made a significant contribution to the broad patterns of our history; or

b) That are associated with the lives of persons significant in our past; or

c) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

d) That have yielded or be likely to yield information important in prehistory or history.

The criteria for significance of archaeological resources are included in CEQA, as amended by Public Resources Code Section 21083.2. Besides placing limitations on the development and implementation of archaeological mitigation plans, this law requires a lead agency to make a

determination of 1) whether a project will have a significant effect on archaeological resources and 2) whether such resources are "unique" under the law. A unique archaeological resource is defined as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

a) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;

b) Has a special and particular quality such as oldest of its type or best available example of its type;

c) Is directly associated with a scientifically recognized important prehistoric or historic event or person. (PRC 21083.2 (g)).

CULTURAL RESOURCE ISSUES

Because the natural processes of erosion and alluviation have differentially affected large portions of the project area, there is a high likelihood that as yet undiscovered archaeological resources exist in subsurface contexts within the project area. Aerial photographs have documented previous episodes of lateral channel movement, down cutting, alluviation, and flooding which have modified the flood plains of the Sisquoc and Santa Maria Rivers and in many cases likely would have removed or buried any associated cultural resources. High rates of topsoil accumulation associated with alluviation, especially common in the agricultural fields of middle and lower reaches of the project area, can rapidly cover existing cultural deposits and greatly reduce the ability to recognize their existence from surface indicators. In the lower reaches of the Santa Maria River, west of Santa Maria, cultural deposits are commonly found in buried contexts along riverbanks. Their discovery is often accidental and usually follows large winter storm events which cause the routes of natural water courses to change and new banks to be cut. Because both historic and prehistoric human settlement is likely to have followed the course of river channels over time, there is always the potential for encountering cultural deposits covered by substantial accumulations of sediment. Unfortunately, these resources are not usually detectable by surface field reconnaissance techniques, but are occasionally discovered following major storm events or discovered accidentally during the course of mining or flood control maintenance-related excavation. Because the present agricultural lands within the project area contain partially stabilized accumulations of alluvium, they are considered to have a high potential for containing buried cultural resources.

The policies, implementing standards and plan requirements listed below are intended to provide guidance to the agencies and the mine operators in the event that significant or unique cultural resources are discovered as a result of future mining operations.

Policy ARCH-I (Avoidance): Avoid impacts to significant or unique cultural resources where feasible.

Policy ARCH-II (Resource Protection): Provide mechanisms for protection of any significant or unique cultural resources that may be discovered as a result of mining and reclamation operations.

Implementing Standards and Plan Requirements:

1) ***Archaeological Survey***: All new off-channel mining areas shall be subject to a Phase 1 archaeological survey pursuant to County Archaeological Guidelines (if not previously prepared) and if required, Phase 2 and Phase 3 studies shall be performed if significant resources are encountered and potential impacts are unavoidable.

2) ***Discovery of Resources***: In the event archaeological remains are encountered during grading, work shall be stopped immediately or redirected until a County qualified archaeologist and Native American representative are retained by the applicant to evaluate the significance of the find pursuant to Phase 2 investigations of the State and County Archaeological Guidelines. If remains are found to be significant, they shall be subject to a Phase 3 mitigation program consistent with State and County Archaeological Guidelines and funded by the applicant.

3) ***Notification***: A formal set of operating and notification procedures related to discovery of cultural resources shall be established by each operator. These procedures shall include provisions for halting mining work in a specific area pending the outcome of a formal cultural resource evaluation.

4) ***Subsurface Testing***: If determined to be necessary pursuant to the recommendations of a Phase I analysis, a Phase 2 subsurface testing program to evaluate the nature, extent, and significance of the cultural resources shall be implemented. This evaluation program shall be designed to assess each archaeological site consistent with State and County Archaeological Guidelines. Should this program determine that the archaeological sites are significant, a Phase 3 mitigation program in the form of data recovery excavation shall be required consistent with State and County Archaeological Guidelines.

CHAPTER X: AIR QUALITY

BACKGROUND

The project area is located within the South Central Coast Air Basin, which covers an area of 5,538 square miles, encompassing the counties of Santa Barbara, San Luis Obispo, Ventura and the north-central portion of Los Angeles County.

Air quality is affected by both the rate and location of pollutant emissions and by meteorological conditions which influence movement and dispersal of pollutants. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients, along with local topography, provide the link between air pollutant emissions and air quality.

The airflow around both counties plays an important role in the movement of pollutants. In general, wind speeds are light to moderate throughout the year. Westerly winds dominate during the spring and summer months. Winds demonstrate a diurnal variation, with onshore breezes in the daytime and weak offshore winds occurring at night. Dry northeasterly winds commonly referred to as Santa Anas or Santa Ana conditions, occur primarily during the fall and winter months. These are warm, dry winds which descend down the slopes of a mountain range. Wind speeds associated with Santa Ana conditions are generally 15-20 miles per hour (mph), though they can reach speeds in excess of 60 mph. During Santa Ana conditions, pollutants emitted in Santa Barbara, San Luis Obispo, Ventura County, and the South Coast Air Basin are moved out to sea. These pollutants can then be moved back onshore in what is called a "post Santa Ana condition". The effects of this condition can be experienced throughout both counties; however, not all post Santa Ana conditions lead to high pollutant concentrations.

AIR QUALITY STANDARDS

State and federal agencies have set ambient air quality standards for certain air pollutants. National Ambient Air Quality Standards (NAAQS) have been established for carbon monoxide (CO), ozone (O_3), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), and inhalable particulate matter (PM_{10}). The state has established ambient air quality standards for these and other pollutants; the state standards are more stringent than the corresponding federal standards.

Areas are classified under the Federal Clean Air Act as either "attainment" or "non-attainment" areas for each criteria pollutant, based on whether the NAAQS have been achieved or not. The project area is located in the Santa Barbara County and San Luis Obispo County sub-areas of the South Central Coast Air Basin. Santa Barbara County is designated as a non-attainment area for O_3 and has not met the federal and state standards for O_3, nor does it meet the state 24-hour standard for PM_{10}. San Luis Obispo County, on the other hand, is designated as an attainment area for all the criteria pollutants based on the NAAQS. However, because state standards for O_3 and PM_{10} are currently exceeded in the County, the California Air Resources Board (ARB) has designated the County as a non-attainment area for these pollutants.

In California, the ARB, the State agency responsible for coordinating both state and federal air pollution control programs in the State, regulates mobile emission sources, and oversees the activities of county Air Pollution Control Districts (APCDs) and regional Air Quality Management Districts (AQMDs). The Santa Barbara County Air Pollution Control District and the San Luis Obispo County Air Pollution Control District are responsible for developing and enforcing regional regulations to control ambient air quality in their respective Counties.

Santa Barbara County: The first Air Quality Attainment Plan (AQAP) for the County was developed in 1979, and was updated in 1982. These two plans were prepared in response to mandates established by the Federal Clean Air Act of 1970. Subsequent to the inability of the County to attain the ozone standard, which was predicted to be attained by 1984, the APCD Board of Directors adopted the 1989 AQAP in June of 1990, which has committed the County to adopt and implement over 50 new emission control measures designed to bring the southern portion of the County into attainment with the federal ozone standard.

In December 1991, the AQAP was updated in order to address the mandates established by the California Clean Air Act (CCAA), which came into effect on January 1, 1989. The CCAA requires all non-attainment air basins in the State to develop new attainment plans in order to meet Federal and State air quality standards. The CCAA also places several performance tests before each plan. The 1991 AQAP provides a formula for complying with the new Federal Clean Air Act by presenting a countywide attainment strategy and an air quality planning foundation which can be extended to meet the new federal mandates.

San Luis Obispo County: In 1979, the County prepared an Air Quality Attainment and Maintenance Plan (AQAMP), which represents the first comprehensive planning effort in San Luis Obispo County. This AQAMP proposed the adoption and implementation of an extensive set of stationary source and transportation control measures designed to attain the primary federal oxidant standard, which was exceeded by the County, by the end of 1987.

Subsequent to the adoption of the 1979 AQAMP, the Environmental Protection Agency (EPA) changed the federal oxidant standard from 0.08 ppm to 0.12 ppm ozone standard. Because there had been no violations of the revised standard within the previous three years, the County then qualified for redesignation as an attainment area for ozone. The San Luis Obispo Area Coordinating Council, formerly known as the Area Council of Governments, and the ARB agreed that adoption and implementation of the AQAMP was still important to maintain attainment in view of the projected increase in population and industrial emissions. However, without a regulatory mandate for implementation, less than half of the proposed stationary source controls have been adopted to date.

In 1991, the County prepared a Clean Air Plan (CAP), which addressed the attainment and maintenance of state and federal ambient air quality standards. The 1991 CAP focused primarily on the ozone attainment problem. The intent of the 1991 CAP is to provide guidance to the APCD, the County, and other local agencies regarding the attainment and maintenance of the state standard for ozone.

EXISTING AIR QUALITY

Applicable federal and state ambient air quality standards for the criteria pollutants are presented in the table below. Currently, the ARB maintains an air quality monitoring station at the Santa Maria Library on Broadway in the City of Santa Maria, approximately three miles west of the northern end of the project site. Presently, the County of Santa Barbara has met and/or attained all of the NAAQS and state standards with the exception of the standards for O_3 and the state standard for PM_{10}.

FEDERAL AND CALIFORNIA AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	Federal Standard	California Standard
Ozone (O_3)	1-hour	0.12 ppm	0.09 ppm
Carbon Monoxide (CO)	1-hour	35.0 ppm	20.0 ppm
	8-hour	9.0 ppm	9.0 ppm
Nitrogen Dioxide (NO_2)	1-hour	--	0.25 ppm
Sulfur Dioxide (SO_2)	24-hour	0.14 ppm	0.05 ppm
Particulate Matter (PM_{10})	24-hour	150 $\mu g/m^3$	50 $\mu g/m^3$

ppm - parts per million; $\mu g/m^3$ - micrograms per cubic meter.

SOURCE: California Air Resources Board, *Air Quality Data Summary*.

AIR QUALITY ISSUES

The project will have direct and indirect effects on air quality in the Santa Maria area. By providing additional aggregate reserves, the life of the existing mining operations is extended for a number of decades, extending the period of time in which project related emissions from mining operations and aggregate processing facilities are discharged into the basin. Anticipated increases in production also will involve additional haul truck trips which will also generate additional emissions. The project also provides substantial benefits to local air quality by providing a centrally located source of aggregate material to serve the needs of the region. The central location of the project area within the Santa

Barbara/San Luis Obispo Production/Consumption Region minimizes hauling distances and associated emissions which would be generated if aggregate had to be obtained from more distant sources. In order to reduce project related emissions, the following policies, implementation standards and plan requirements are included in this plan:

Policy AIR-I (Equipment Replacement): Require any mining operator owned equipment that is no longer operational to be replaced with equipment which will meet CARB and EPA heavy duty vehicle emission standards applicable to the model year of the replacement equipment.

Implementing Standards and Plan Requirements:

1) ***Equipment Replacement***: The County shall monitor equipment replacement through the SMARA annual inspection process to ensure that any replacement equipment includes CARB and EPA approved control technology for that model year.

2) ***Truck Maintenance***: Haul trucks owned by the operators shall be maintained in proper tune to minimize NO_X and ROG emissions.

Policy AIR-II (Processing Equipment Replacement): Require any new, permanent, aggregate processing equipment to be powered with the least polluting source of energy feasible and available to the operator consistent with APCD requirements. Encourage use of cleaner burning fuels to power processing facilities where feasible.

Implementing Standards and Plan Requirements:

1) ***Clean Fuels***: When reviewing permit requests for modifications to the existing processing facilities, Planning & Development, in consultation with the Air Pollution Control District, shall ensure that any new equipment is powered with clean burning fuels if available.

Policy AIR-III (Dust Control): Require continuing use of dust supression measures as necessary along haul roads and at plant sites to minimize visible air-borne dust.

Implementing Standards and Plan Requirements:

1) ***Dust Suppressants***: The mining operators shall continue to use water truck sprayers and approved dust suppressants on all on-site roads and working areas to reduce visible dust. The operator shall designate a person or persons to monitor the dust control program and to order increased watering as necessary to prevent transport of dust off-site.

Policy AIR-IV (Recycling Facilities): Encourage development of aggregate recycling facilities at each processing plant to help conserve aggregate resources within the project area.

CHAPTER XI: IMPLEMENTATION

INTRODUCTION

Chapter III, Mining and Reclamation, describes the projected sequence and phasing of mining and reclamation for the Coast Rock and Kaiser Sand and Gravel operations. However, a number of factors outside of the scope of this planning process influence the rate and sequence of excavation within the project area. As a result, the timeframe for completion of mitigation and reclamation requirements can also be affected. In implementing this Plan, these external factors must be recognized so that the public and private goals established by this Plan will be achieved. A framework for close, continuing, cooperation between the public agencies involved in monitoring Plan implementation is needed to allow for flexibility in responding to such changes. This chapter discusses the variables influencing the sequencing and phasing of mining and reclamation and provides direction for continuing agency coordination throughout Plan implementation.

SEQUENCE OF EXCAVATION

The operators produce a number of different finished products from the raw material brought to their plant. The dominant size of the sand and gravel changes dramatically along the length of the project area, becoming finer downstream as a result of abrasive stream action. To generate the variety of particle sizes for blended products needed to meet a wide range of specifications, raw material is taken from several different locations during the course of a year, influencing the necessary sequence of mining.

Another influence on where and when excavation occurs is the seasonal river flow. Although there are periods during which the streambed is dry throughout the year, on the average excavation within the river channel is limited to about nine months because of actual flow or saturated conditions. The ability to mine outside of the river channel when streambed extraction has to be curtailed is critical to the efficient year-round use of manpower and equipment.

PRODUCTION RATES

The rate of excavation is essentially dependent upon market demand. This, in turn, is responsive to many variables which influence construction activity. The rate also depends upon how successful the operators are in competitive bidding for supplying construction aggregate. To project a logical sequence for the mining operation it was necessary to first establish a reasonable estimate of future rates of production. For an estimated annual volume of excavation, it was assumed that past demand would continue and would increase as other sources supplying aggregate to the region are depleted.

Table 13

Historic Population Growth in the San Luis Obispo/ Santa Barbara County Production/Consumption Region (DMG Special Report #162)

1960	1987	Average Annual Growth Rate
237,000	522,000	2.97%

Table 14

Estimated Aggregate Demand in SLO/SB County Production/Consumption Region for Year 2015[1]

Growth Rate	Estimated Population	Per Capita Consumption (Tons)	Totai Consumption (Tons)	Estimated Sisquoc District Market Share (Miis of Tons)[2]	Estimated Production Coast Rock[3]	Estimated Production Kaiser Sand & Gravel[3]
1%	682,705	6	4,096,231	1.64 to 2.05	1.25 Mil Tons	.65 Mii Tons
1.5%	772,414	6	4,634,482	1.85 to 2.32		
2%	873,380	6	5,240,279	2.1 to 2.62		
2.5%	986,951	6	5,921,705	2.37 to 2.96		
3%	1,114,627	6	6,687,761	2.68 to 3.34		

Notes:

1. Based on DMG Popuiation Projection for Base Year, 1990
2. Market Share Estimated to be 40-50% Based on DMG Special Report No. 162
3. Average Annual Production Estimated by Operators after 23 years of operation.

Table 15

Population Growth Scenario	**Estimated Aggregate Reserves Needed from Sisquoc District to Supply Projected Aggregate Demand in the SLO/SB County Production/Consumption Region (Miliions of Tons)[1]**		
	25 yrs	50 yr	75 yr
1%	45.6	103.9	240.5
1.5%	48.7	119.4	296.7
2%	52.2	137.8	370.8
2.5%	55.9	159.6	469.3
3%	59.9	185.6	601

Notes:

1. Assuming 1990 as the Baseiine Popuiation, 6 tons per capita per year aggregate consumption, and a 50% estimated market share for the Sisquoc District

Source: Data Derived From DMG Special Report #162

Table 16

Estimated Aggregate Reserves Available for Production (Millions of Tons)						
Coastrock			Kaiser Sand and Gravel			Total
0-23 yrs (Mil Tons)	Remainder (Mil Tons)	Estimated Project Life	0-23 yr (Mil Tons)	Remainder (Mil Tons)	Estimated Project Life	Mil Tons
29	88	55-70 yrs	18-19	0	20-23 yrs	136.3

A number of factors influence market demand and affect the rate of production. These variables include the state of the economy, authorization for public works projects, residential and commercial development, and maintenance and replacement programs. Any or all of the influences on demand could significantly depart from current projections so that estimates of future rates of production can only be approximate. A natural disaster or other major emergency could abruptly increase demand and require accelerated production. In any event, a change in the rate of production is likely to only affect the timing of excavation; it is unlikely to change the sequence or the manner in which mining is planned to occur.

EXCAVATION

The excavation plan described in Chapter III reflects a number of basic considerations which, taken together, determined the sequence for extraction. These include:

- Logical progression of channel expansion to provide increasing flood control capacity.
- Continuity of the channel excavation between both Coast Rock and Kaiser project areas.
- Access to a variety of aggregate grades at all times.
- Projected production during each time period.
- Limitation of on-site haul distances as much as possible.
- Availability of off-channel working areas throughout the life of the project to allow for periods when the streambed is too wet for equipment to operate in.
- Establishment of permanent habitat areas and reclaimed agricultural fields as soon as possible.
- Reclamation of existing depleted pits as habitat and agricultural areas in the initial phase of mining and reclamation operations.

- Completion, as a goal, of in-channel mining activities within the upper reach of the Coast Rock project area within the first 10 years of operations to allow early regeneration of disturbed biological resources.
- Completion, as a goal, of in-channel mining activities between Garey Bridge and the Kaiser Sand and Gravel site, upon completion of Phase II operations.
- Completion, as a goal, of Kaiser Sand and Gravel channel widening activities within the first 10 years of operations, with in-channel mining operations on the Kaiser site limited by County approved redline depths thereafter.
- Cessation of any further in-channel mining operations in the "Ledges Unit" on the Kaiser Sand and Gravel site.
- Existing lease commitments.

The sequence of excavation for Coast Rock represents the best projection possible for an operation subject to many unpredictable influences. Production rates could change due to fluctuations in market demand, which would directly affect the timing of the proposed mining and could reduce the estimated time for any stage. Availability of specific areas within the Plan area will be subject to lease agreements, which could require modifications to the projected sequence of excavation. Similar considerations apply to the Kaiser Sand and Gravel operation. For these reasons, there will be a need for flexibility in implementing the excavation plan and associated phasing plan. Approval of the Specific Plan and subsequent implementing discretionary permits, will provide the framework within which such flexibility can be accommodated.

ANNUAL REVIEW

All permitted mineral resource extraction operations shall be inspected annually by the Counties/City, for compliance with the permit and reclamation plan conditions. A compliance report shall be submitted as required by the local jurisdiction and SMARA.

PERIODIC REVIEW

In view of the nature and scope of the mining operation, including its extended period of time, it is necessary to ensure that significant environmental impacts will continue to be effectively mitigated as operations proceed throughout the life of the mining operations. The Counties shall be provided with the opportunity to periodically review the adequacy of the mitigation measures created for the mining operation to assess their effectiveness. Periodic review shall consist of the following:

1) Review and approval by County staff of mining and reclamation implementation plans at least every five (5) years concurrently with U.S. Army Corps of Engineers Section 404 permit review for in-channel mining and every ten (10) years for off-channel mining. These periodic mining and reclamation implementation plans will include detailed grading plans depicting existing conditions, proposed mining, and ultimate post-reclamation topography so that the Counties can evaluate progress toward ongoing completion of mining and reclamation operations. Specific plans and information concerning affected agricultural resources, biological resources, hydrologic resources, and various miscellaneous information required by the Counties as specified in permit conditions shall be provided with each periodic plan.

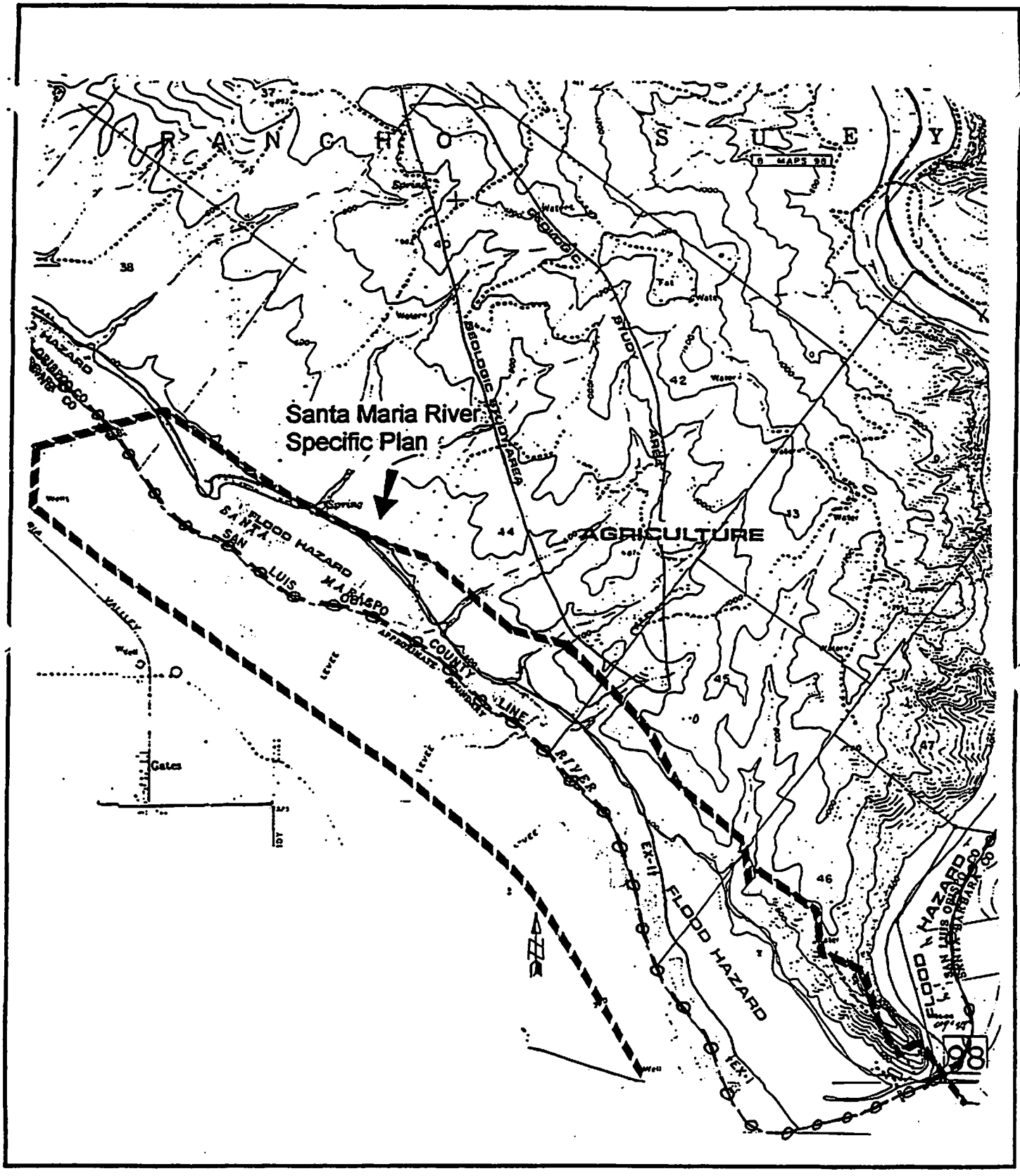
2) Review by the County Planning Commission every ten years to ensure that the policies and standards of this Specific Plan, and any implementing permit conditions, are being adequately implemented and are effectively mitigating environmental impacts as projected in the project Final EIS/R. If during each ten (10) year review, the Palnning Commission determines that the conditions imposed on the project are inadequate to effectively mitigate significant environmental impacts caused by the project, then the Planning Commission may impose reasonable additions to or modifications of project conditions to further mitigate these significant environmental impacts. Imposition of such conditions shall only be considered and imposed as part of the Planning Commission's comprehensive review of the project conditions. In imposing such additional or modified conditions, the Planning Commission, and the Board of Supervisors, upon appeal, shall determine whether the new or modified condition(s) is/are reasonable considering the economic burdens imposed and the environmental benefits to be derived. Nothing in this condition alters the County's ability to review specific conditions as set forth elsewhere, or the County's ability to add, delete, and modify conditions as part of a revocation proceeding pursuant to applicable County ordinances.

3) Review by the County Planning Commission upon expiration of any implementing discretionary permit.

AGENCY COORDINATION AND PERMIT RENEWAL

The Specific Plan area encompasses lands within the jurisdiction of Santa Barbara County (acres) and San Luis Obispo County (acres), as well as areas within the river channel below the ordinary high water mark, known as "Waters of the United States", under the primary jurisdiction of the U.S. Army Corps of Engineers. In addition, various trustee and responsible agencies are also involved in certain aspects of the Plan. These agencies include: CALTRANS, State Department of Fish and Game, U.S. Fish and Wildlife Service, National Marine Fisheries Service, and State Division of Mines and Geology. Other agencies, such as the City of Santa Maria and the California Coastal Commission, have jurisdiction over downstream areas outside of the Specific Plan boundaries which can be indirectly affected by actions within the project area. Finally, special districts, such as the Santa Maria Valley Water Conservation District, are also involved in the planning and implementation process in an advisory capacity since the District is responsible for the operation of the Twitchell Reservoir project which releases water into the lower reach of the project area. With the multitude of public and quasi-public agencies involved in various aspects of the project, it is important to provide mechanisms through this Plan to coordinate the activities of these agencies. Encouraging coordination between the agencies will avoid duplication of effort and promote consultation and collaborative decision-making for actions that can impact the entire watershed.

In addition, since this Plan is intended to be phased over a period of many decades, it is also necessary to clearly specify the criteria that will be considered when permit renewals for subsequent phases are submitted. The policies, implementation standards and plan requirements below address these issues.



an Luis Obispo County

Santa Barbara County

Figure 31
SLO/SB County Boundary

Policy Agency-I (Streamlined Review): Develop a streamlined permit review process for submittal and evaluation of permit renewals for the area downstream of the Cuyama River confluence with the Santa Maria River where Santa Barbara and San Luis Obispo Counties share jurisdiction over in-channel mining operations. Develop a memorandum of understanding between the Counties assigning lead agency status to one of the Counties and allowing the lead County to prepare any necessary environmental documentation for future permit review for this area of joint jurisdiction. Require full consultation between the Counties prior to any permit actions in this area.

Policy Agency-II (Joint Consultation): Each County shall consult in advance with the other County, City of Santa Maria, Flood Control District, Santa Maria Valley Water Conservation District and Army Corps of Engineers and other applicable regulatory agencies with respect to permit actions within and adjoining the project area.

Policy Agency-III (Monitoring Coordination): Coordinate ongoing permit/mitigation monitoring for mining operations under the jurisdiction of both Counties in the area downstream of the Cuyama River confluence.

Implementation Standards and Plan Requirements:

1) ***Joint Review Panel***: The Joint Review Panel (JRP) established to guide the planning and environmental review process for this project shall remain in place to provide ongoing coordination and guidance during Plan implementation. The primary, voting membership of the JRP shall be comprised of the following agencies: Santa Barbara County Planning & Development, San Luis Obispo County Planning & Building, U. S. Army Corps of Engineers, Santa Barbara County Flood Control District. Advisory members of the JRP shall include: The City of Santa Maria Community Development Department, CAL TRANS, State Division of Mines and Geology, Office of Mine Reclamation, the Santa Maria Valley Water Conservation District, and representatives of each mine operator in the Plan area. Advisory members will be available to the JRP to provide advice and consultation, as necessary. A Memorandum of Understanding between the voting members of the JRP will be developed formalizing the continuing existence and responsibilities of the JRP prior to review and approval of the first Periodic MRP for the project. The responsibilities of the voting membership of the JRP shall include, but not be limited to the following:

   a) Review and approval of all Periodic MRP's prior to commencement or continuation of mining operations in each designated mining area;

   b) Review of any proposed amendments to this Specific Plan. The JRP shall provide its recommendation concerning the proposed amendment to the Planning Commission and Board of Supervisors of each County;

   c) Oversight of project monitoring;

d) Review and approval of the scope of work for any subsequent environmental review that may be necessary in association with any proposed amendments to the Specific Plan or permit renewals.

e) Preparation of a brief (3-5 page) project status report for each County Planning Commission and any other interested parties upon review and approval of each periodic MRP.

2) ***Permit Term Coordination***: Permit periods in the area of joint jurisdiction shall either be the same, or, if not the same, interim review for the permit with the longer term shall be coordinated with expiration and renewal of the permit with the shorter term. The intent of this provision is to ensure that any changes to permit conditions adopted upon renewal of a permit by either County can, if appropriate, be incorporated into the permit of the other County in a timely fashion during the interim review.

3) ***Monitoring***: Monitoring responsibility for this area shall be delegated to a representative from one of the Counties to avoid duplication of fees, reports, inspections and other efforts. Each County will be provided copies of all monitoring reports for the area of joint jurisdiction.

Policy Agency-V (Model Update for Downstream Operations): Prior to approval of any permits by San Luis Obispo County for surface mining operations downstream of the existing specific plan area, the hydrology/sediment transport model for the overall project area shall be updated by said downstream applicant/operators to the satisfaction of the JRP. Impacts identified by the updated model attributable to proposed changes in downstream surface mining operations shall be mitigated to the maximum extent feasible by those downstream operators.

Policy Agency-VI (Permit Renewal Criteria): Establish criteria for evaluating requests for permit renewal upon completion of the initial permitted phase of mining and reclamation operations.

Implementation Standards and Plan Requirements:

1) ***Phasing***: Subsequent permits will be granted in accordance with the Phasing Program included in this Specific Plan provided that all findings required by County ordinance for renewal or approval of discretionary permits for mining and reclamation, as well as the following supplemental findings, can be made prior to approval of any subsequent permit:

a) The proposed permit renewal is consistent with the Specific Plan, including, but not limited to: phasing, all goals, policies, implementation standards, and plan requirements.

b) The environmental document has been updated, as required, to provide a current, accurate analysis of the project setting and all potentially significant environmental impacts associated with the proposed permit renewal;

c) All potentially significant environmental impacts identified in the updated environmental review for the proposed permit renewal have been mitigated to the maximum extent feasible;

d) Surface mining operations approved for the initial permit phase have been carried out in conformance with all applicable permit conditions and Plan requirements;

e) Reclamation of mined lands disturbed in the initial phase has been completed to the satisfaction of the Counties in conformance with all applicable conditions as required by the approved Plan.

Policy Agency-VII (Progress Report for Permit Renewal): Require a comprehensive progress report, funded by the mine operators and prepared under the direction of the JRP, prior to the County Planning Commission's interim review and prior to consideration of any permit renewal, including an updated description of the project setting, a status report on mining and reclamation activities to date and mining and reclamation activities proposed for the remaining term of the permit, an evaluation of the efficacy of project mitigation measures and conditions, an evaluation of ongoing compliance with SMARA performance standards, and recommendations for any revisions to the project description and/or project conditions for Planning Commission consideration.

SPECIFIC PLAN AMENDMENT PROCESS

After adoption, this Plan may be amended in accordance with State law and applicable County ordinances. Any interested party including Specific Plan area property owners, mining operators, or the Counties may propose an amendment to the Specific Plan. The application for amendment shall be in a form specified by the Planning Director of the jurisdiction in which the parcel(s) lies, and shall explain the proposal and the reason for the change and should be accompanied by any necessary supporting documents and plans.

State law requires that the Specific Plan must be amended in the same manner as the general plan. During the amendment of the plan there must be an opportunity for the involvement of citizens, public agencies, public utility companies, civic groups and any other community groups through public hearings and any other means each County deems appropriate. The Planning Commission must hold at least one public hearing after providing notice as required by State law. The Planning Commission must also make a written recommendation on the amendment of the plan to the Board of Supervisors.

The Board of Supervisors shall conduct a public hearing after first providing the required public notice and shall amend the plan by resolution or by ordinance. The Board of Supervisors may approve, modify, or disapprove the recommendation of the Planning Commission, however, any substantial modification proposed by the Board of Supervisors not previously considered by the Planning Commission during its hearings shall first be referred to the Commission for its consideration.

Any amendment proposed to this Plan must be consistent with the General Plan. If a proposed amendment includes a change in land use designation, a General Plan Amendment may also be required depending on the magnitude of the proposed change. General Plan Amendments can be considered only four times a year. Specific Plan Amendments have no yearly numerical limitation.

FINANCIAL ASSURANCES

All persons or operators responsible for the reclamation of mined lands shall submit effective financial assurances to the Counties/City to ensure the completion of approved reclamation. The content and form of the assurances shall meet SMARA and County requirements. The amount of the assurances shall be determined annually as required by SMARA and must be sufficient to cover costs associated with reclamation of all previously disturbed unreclaimed areas and of areas projected to be disturbed in the following year. Standards for the implementation of financial assurances are not developed for this plan since State law and County ordinance establish the standards for compliance.

SUBSEQUENT PERMITS

Discretionary implementing permits shall be required prior to mining or reclamation on any portion of the Plan Area. The policies and regulations contained in this Specific Plan shall provide the primary basis for considering all applications for any implementing permit.. If the standards contained in any other ordinance or regulation of the Counties conflict with any regulation or policy in this Specific Plan in a manner that affects consideration of such implementing permit application, this Specific Plan shall take precedence. Where this Specific Plan does not include a standard or provision covering a particular

issue, the other provisions of the County General Plan and implementing ordinances shall apply. The following lists each jurisdiction's permit requirements.

Santa Barbara County Permit Requirements:

- A Mining Permit (Conditional Use Permit) and Reclamation Plan pursuant to Zoning Ordinance Article III, Sections 35-320.3, 35-520.5, and 35-315, et. seq.

San Luis Obispo County Permit Requirements:

- A Development Plan and Reclamation Plan pursuant to Land Use Ordinance Section 22.0.182 and 22.08.183.

INTERPRETATIONS

If there is any questions as to the interpretation of any portion of this plan, the Planning Director is responsible for such interpretation. Any such determination by the Planning Director may be appealed in accordance with Section 22.01.42 (Appeal) of the Land Use Ordinance (San Luis Obispo County) or Section 35-327 (Appeal) of Article III of the County Zoning Ordinance (Santa Barbara County).

In any cases where uncertainty exists regarding the location of any Land Use category or other symbols or designations on maps, or any uncertainty concerning the definition of an proposed use of land, refer to the Land Use Ordinance, Section 22.01.041, "Rules of Interpretation" for San Luis Obispo County and 35-200.6 of Article III of the County Zoning Ordinance for Santa Barbara County.

In the event of any conflict between the provisions of this Plan and any other adopted County Plan or ordinance, the most restrictive provision shall apply as determined by the Planning Director in each respective jurisdiction. The underlying zoning district designations and regulations pursuant to Article III and Ordinance No. 661 of the Santa Barbara County Code shall remain in effect within the Specific Plan area except where specifically modified by this Plan. The underlying Land Use and Combining Designations pursuant to the San Luis Obispo County Land Use Element and the regulations of the Land Use Ordinance (Title 22 of the County Code) shall remain in effect within the Plan area except where specifically modified by this Plan.

ENVIRONMENTAL DOCUMENTATION

Adoption or amendment of a Specific Plan is a project subject to the California Environmental Quality Act (CEQA). EIRs are usually prepared for new Specific Plans due to the magnitude of environmental effects associated with such plans.

This Specific Plan has been evaluated in a Program EIS/R (Section 15168 of the CEQA Guidelines), which is an EIR prepared for a series of related actions that are characterized as one large project. This EIS/R was prepared as a joint NEPA/CEQA environmental document by the U.S. Army Corps of

Engineers and both Counties. As subsequent activities occur in accordance with the Specific Plan, or as amendments to the Specific Plan are proposed, these activities will be reviewed by each agency to determine whether they fall within the scope of the original Program EIS/R or whether further environmental review will be necessary. Any additional environmental review that may be required may be tiered with the original Program EIS/R in accordance with applicable NEPA and CEQA implementation guidelines adopted by each agency.

APPENDIX A

California Department of Conservation
Division of Mines and Geology

SPECIAL REPORT 162

Santa Maria and Sisquoc Rivers Specific Plan

MINERAL LAND CLASSIFICATION: PORTLAND CEMENT CONCRETE AGGREGATE AND ACTIVE MINES OF ALL OTHER MINERAL COMMODITIES IN THE SAN LUIS OBISPO-SANTA BARBARA PRODUCTION-CONSUMPTION REGION

1989

CALIFORNIA DEPARTMENT OF CONSERVATION
DIVISION OF MINES AND GEOLOGY

SPECIAL REPORT 162

CALIFORNIA
DEPARTMENT
OF CONSERVATION
Division of Mines and Geology

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SPECIAL REPORT 162

MINERAL LAND CLASSIFICATION: PORTLAND CEMENT CONCRETE AGGREGATE AND ACTIVE MINES OF ALL OTHER MINERAL COMMODITIES IN THE SAN LUIS OBISPO-SANTA BARBARA PRODUCTION-CONSUMPTION REGION

1989

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EXECUTIVE SUMMARY

The San Luis Obispo-Santa Barbara Production-Consumption (P-C) Region, as defined in this report, covers approximately 2,062 square miles and includes the urbanizing portions of San Luis Obispo and Santa Barbara counties. In any urbanizing region it is important that land-use decisions be made with full recognition of the local natural resources. Mineral resources, including construction aggregate, are limited within a given region. This is especially true of Portland cement concrete (PCC) aggregate resources, an indispensable, high-grade construction aggregate which is costly to transport. This report provides information concerning the location, tonnage, and quality of aggregate resources in the San Luis Obispo-Santa Barbara P-C Region and the projected demand for aggregate for the next 50 years. This report also provides information on all other active mines and the mineral deposits being mined within the region.

The loss of regionally significant mineral deposits to land uses that preclude mining is one of the problems that the California Surface Mining and Reclamation Act of 1975 (SMARA) was framed to address. Based on guidelines adopted by the California State Mining and Geology Board (Board), the California Department of Conservation's Division of Mines and Geology (DMG) has classified land for Portland cement concrete (PCC) aggregate resources and all other mineral deposits being actively mined within the San Luis Obispo-Santa Barbara P-C Region. This classification study will assist the Board if a subsequent process, called designation, is initiated. Designation is the formal recognition by the Board of lands containing resources of regional or statewide significance that are needed to meet the demands of the future.

Both processes, classification and designation, require specific mandated actions by the lead agencies having jurisdiction over the resources identified in this report. These actions include:

1. Recognition of the mineral classification information including the classification maps transmitted to the lead agency by the Board.

2. Emphasis on the conservation and development of the identified mineral deposits.

The boundaries of the San Luis Obispo-Santa Barbara P-C Region were defined to include all areas within the two counties where PCC-grade aggregate is produced (the mining sites), and the market area where their product is consumed (the urban centers within the counties). The boundary was subsequently refined so that imports of aggregate from mines outside of the San Luis Obispo-Santa Barbara P-C Region or the adjacent Western Ventura County P-C Region were less than 5 percent of the total consumption (mines in the Western Ventura County P-C Region provide about 10 percent of the San Luis Obispo-Santa Barbara P-C Region demand), and aggregate exports out of the P-C region to more distant markets were less than 1 percent. The P-C region is therefore as near to a closed system as possible, with aggregate production nearly equal to aggregate consumption within it.

DMG has classified the San Luis Obispo-Santa Barbara P-C Region according to the presence or absence of significant sand, gravel, or stone deposits that are suitable as sources of Portland cement concrete aggregate and all other mineral deposits that are actively mined. The land classification within the San Luis Obispo-Santa Barbara P-C Region is presented in the form of Mineral Resource Zones (MRZ) on 41 U.S. Geological Survey topographic quadrangle maps that accompany this report (Plates 1-41) and two generalized MRZ classification maps of the region (Plates 57 and 58).

Mineral Resource Zones for PCC-grade aggregate were established on the basis of a sand, gravel, and crushed stone resource appraisal which included a study of pertinent geologic information, field investigations of mines and quarries, and analyses of water well drilling records. Land is classified MRZ-2 if the area contains a minimum threshold value of $9.2 million (5 million 1978 dollars) of suitable aggregate that can be extracted profitably by current mining technology, or mining technology which can reasonably be expected to exist in the foreseeable future.

Five areas within the San Luis Obispo-Santa Barbara P-C Region are classified as MRZ-2 for PCC-grade aggregate. A portion of one of these - the Sisquoc River area - was previously classified by DMG in response to a petition by Coast Rock Products, Inc. The information in that report - Mineral Land Classification of a Portion of the Sisquoc River, Santa Barbara County, California, for Portland Cement Concrete Aggregate (Cole and Jensen, 1986) - was used in this report with no changes in the boundaries of the area classified as MRZ-2 for PCC-grade aggregate.

Active mines within the P-C region that extract mineral commodities other than PCC-grade aggregate or fill are classified as MRZ-2 if the deposit being mined contains at least the minimum threshold value established by the Board for that commodity. Ten active mining sites are zoned as MRZ-2 for other commodities. Many other mining sites are not zoned MRZ-2 because the quantity of material is below the minimum threshold value. Except for the classification of the ten active mines, the San Luis

Obispo-Santa Barbara P-C Region is not classified for mineral commodities other than PCC-grade aggregate.

In order to organize the volume calculations of the PCC-grade aggregate resources, the State Geologist has developed the concept of "sectors." Sectors identify portions of MRZ-2 areas that have not been urbanized. The geometrical configuration and the geologic continuity of the deposits in each sector are fairly uniform, allowing the calculation of aggregate tonnages with some reliability. Thus, for example, sector boundaries are established between that part of a natural deposit formed on an alluvial fan, and that part within the confines of an adjacent modern stream channel. The sector concept is used for the convenience of arraying resource information, and is intended to convey accurate information regarding the location and approximate tonnage of resources found in non-urbanized areas.

Throughout this report the terms "reserves" and "resources" are used with rigorous definitions. *Reserves* are aggregate deposits that are owned or controlled by a mining company, and that are authorized for extraction by appropriate lead agencies through a valid mining permit. *Resources* are all of the available aggregate deposits within an area, including reserves. The estimated resources of PCC-grade aggregate within the five sectors (A - E) amount to 11,175 million tons. These five resource sectors are shown on Plates 42 through 54. Of the 11,175 million tons of resources, 107 million tons are reserves (as of January 1989). These reserves cover 2.1 square miles, which is less than one percent of the classified area.

The projected aggregate consumption of the San Luis Obispo-Santa Barbara P-C Region to the year 2038 is estimated to be 206 million tons, of which an estimated 76 million tons must be of PCC quality. The projected life expectancy of the present reserves of all aggregate in the P-C region is estimated to be 34 years (depletion by the year 2023).

The projected aggregate consumption for the San Luis Obispo-Santa Barbara P-C Region was obtained by determining an average annual per capita rate of past consumption and multiplying that by the population projected for the next 50 years. The average annual per capita rate was derived by correlating aggregate production and population for the past 28 years (1960-1987). The calculated per capita rate of 6.0 tons per year and the population projected to the year 2038 were used to estimate the consumption within the P-C region for the next 50 years (206 million tons). Should unforeseen events occur, such as massive urban renewal, reconstruction in the wake of a disaster, or a major economic recession, the aggregate demand could change considerably.

In addition to those deposits classified as MRZ-2, areas classified as MRZ-3 within the San Luis Obispo-Santa Barbara P-C Region contain possible alternative sources of aggregate. Too little is known about the quality or quantity of these possible sources to permit even crude resource estimates to be made.

As with many forecasts of economic activity, those generated for this report should not be viewed as offering unqualified predictions of the future. The forecasts in this report are based on assumptions that the data used is accurate, and that the economic and urban development trends of the past three decades will continue for the next five decades.

Based on this study and assuming that the consumption forecast is accurate, the following conclusions were reached:

- The anticipated consumption of aggregate in the San Luis Obispo-Santa Barbara P-C Region through the year 2038 is estimated to be 206 million tons, of which 37 percent or 76 million tons must be of PCC quality.

- About 107 million tons of permitted PCC-grade aggregate and about 25 million tons of permitted aggregate other than PCC grade exist within the P-C region.

- As of January 1989, seven mines operated by five different mining companies are permitted to produce Portland cement concrete aggregate in the P-C region. Six of the seven mines are currently active.

- Unless additional aggregate resources are permitted for mining, or alternative resources are utilized, the present 132 million tons of aggregate reserves, including the 107 million tons of PCC-grade aggregate, will be depleted by the year 2023.

- The 132 million tons of aggregate reserves within the P-C region can provide only 64 percent of the anticipated consumption of all aggregate during the next 50 years. The expected longevity of these reserves is based on the assumption that mining will continue to be permitted until the reserves are depleted.

- 11,175 million tons of PCC-grade aggregate resources (including reserves) have been identified within the San Luis Obispo-Santa Barbara P-C Region. Of this total, 6,119 million tons are crushed stone resources, and 5,056 million tons are sand and gravel resources.

- The San Luis Obispo-Santa Barbara P-C Region covers an area of 2,062 square miles, of which 72 square miles (4 percent of the P-C region) were classified as MRZ-2 for PCC-grade aggre-

gate. Of this area, 57 square miles (3 percent of the P-C region) have been sectorized as having current land uses which do not preclude mining. A little over 2 square miles (less than one percent of the P-C region) of the sectorized areas are permitted for mining of PCC-grade aggregates.

- The 57 square miles of sectorized land considered to be available for providing future PCC-grade aggregate needs of the region may not all be practically available. Local governments may have already committed portions of this sectored land to purposes which preclude aggregate mining. The significance of this is that the estimate of available resources may be optimistic. It is, therefore, important that local governments promptly review the sectorized areas to verify the conclusions in this report.

INTRODUCTION

This study provides information on the estimated availability of, and demand for, Portland cement concrete (PCC) -grade aggregate resources within the San Luis Obispo-Santa Barbara Production-Consumption (P-C) Region. The study area covers 2,062 square miles and includes major portions of western San Luis Obispo and Santa Barbara counties (Figure 1). Approximately 40 percent of San Luis Obispo County and 45 percent of Santa Barbara County have been included within the P-C region and have been classified for PCC-grade aggregate. In this area, as in any urbanizing area, important land-use decisions should be made with full recognition of the region's natural resources. This is particularly important with regard to resources of high-grade construction aggregate used in Portland cement concrete. PCC-grade aggregate is an indispensable building material that is costly to transport. This classification report documents for the San Luis Obispo-Santa Barbara area:

1) the location of PCC-grade aggregate resources;

2) the quantity of PCC-grade aggregate within those deposits;

3) the location of all active mines within the region producing commodities other than fill;

4) the demand for aggregate within the region for the next 50 years.

This study was conducted as specified by the Surface Mining and Reclamation Act (SMARA) of 1975. SMARA was passed by the California State Legislature in response to the loss of significant mineral resources due to urban expansion, the need for current information concerning the location and quantity of essential mineral deposits, and to ensure adequate mined-land reclamation. To address mineral resource conservation, SMARA mandated a two-phase process called classification-designation. The objective of the classification-designation process is to ensure, through appropriate local lead agency policies and procedures, that raw material is available when needed and does not become inaccessible as a result of inadequate information during land-use decision-making actions.

SMARA mandates that guidelines for classification and designation be developed by the State Mining and Geology Board (Board). The Board originally adopted formal SMARA guidelines on June 30, 1978. Section 1.1.a of those guidelines requires the State Geologist to classify specified areas into Mineral Resource Zones (MRZ). Classification is the process of identifying lands containing significant mineral deposits, based solely on geologic factors, and without regard to present land use or ownership. The Board recognizes that construction materials (sand, gravel, and crushed stone) are produced regionally, are used in every urban area of the state, and require special classification data. Section 1.3 of the guidelines requires that classification reports pertaining to deposits of construction aggregate materials include the following information: (1) the location and estimated total quantity of construction aggregate available for mining; (2) limits of the market (consumption) region that these potential resources would supply; and (3) an estimate of the total quantity of aggregate material that will be needed to supply the consumption region for the next 50 years. This information will assist the Board in determining the statewide or regional significance of these types of deposits. A copy of the guidelines is printed in "California Surface Mining and Reclamation Policies and Procedures" (California State Mining and Geology Board, 1983). While this publication is currently out-of-print and is being revised, a reproduction can be obtained free of charge from DMG.

Overview of Classification

DMG is responsible under SMARA for carrying out the classification phase of the classification-designation process. Classification entails seven distinct but interrelated steps. These seven steps are described below.

1. *Determination of Production-Consumption (P-C) Region Boundaries.* The boundaries of the P-C region (Plate 55) are drawn along the limits of the marketing area of the active aggregate operations supplying the urban centers under study. The San Luis Obispo-Santa Barbara area was chosen for study because the State Office of Planning and Research (OPR) determined that it is an expanding urban area. The marketing area of the production sites supplying the San Luis Obispo-Santa Barbara area was determined by interviews with aggregate operators and analysis of transportation rates set by the Public Utilities Commission (PUC).

2. *Establishment of Mineral Resource Zones (MRZ).* All lands within the San Luis Obispo-Santa Barbara P-C Region are assigned Mineral Resource Zone classifications (MRZ-1, MRZ-2, MRZ-3, or MRZ-4, which are defined on pages 9-11) based upon geologic appraisal of PCC-grade aggregate resource

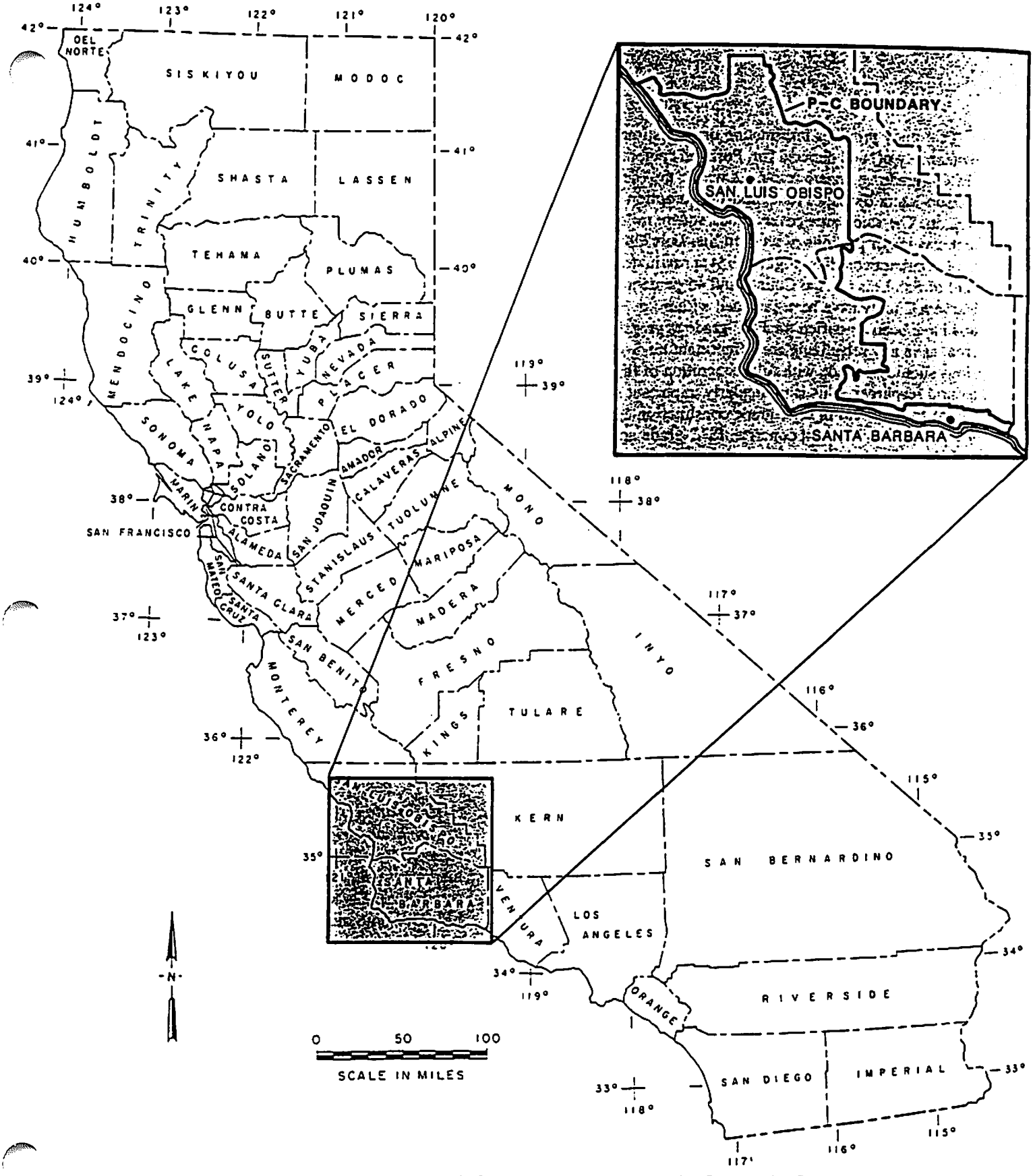


Figure 1. General location of the San Luis Obispo-Santa Barbara Production-Consumption Region.

potential. This mineral land classification is presented on Plates 1-41 and Plates 57 and 58; Figure 2 is an index map showing the coverage of the plates in the P-C region. This appraisal includes study of pertinent geologic reports and maps, field investigation at outcrops and active and inactive pits and quarries, and analyses of water well-logs.

3. *Identification of Available Aggregate Resource Areas as Sectors.* Lands known to contain significant deposits of PCC-grade aggregate resources (areas classified as MRZ-2 in step 2) are evaluated to determine whether or not current uses of these lands preclude possible future mining. Areas currently permitted for mining and areas found to have land uses compatible with possible future mining are considered available for mining. MRZ-2 areas which are not yet developed, but which have Specific Plans approved by local governments, were not considered to be available for mining. Sectors which identify available land are delineated on Plates 42-54 and described in detail in this report. Criteria for sectorization of MRZ-2 areas, established by the Board, are given in the Appendix.

4. *Calculation of Resource Tonnages within Sectors.* Investigation and analysis of on-site conditions, measurement of the areal extent of deposits, drill-hole information, waste-material percentages, and deposit densities are used to calculate total tonnages of PCC-grade aggregate reserves (deposits in land owned by an aggregate producer and permitted for mining by local government as of January 1, 1989) and resources (all deposits known to be of PCC grade, including the reserves) within each sector. Calculations reflect conditions of the deposits as of January 1, 1989 and do not include resource depletion since that date.

5. *Forecast of 50-Year Needs and the Life Expectancy of Current Reserves.* The total tonnage of aggregate needed to satisfy the demand in the San Luis Obispo-Santa Barbara P-C Region over the next 50 years is based on multiplying the projected population over that period with the average annual per capita rate of total aggregate consumption from 1960-1987. Even though all identified reserves are of PCC grade, other aggregate commodities are routinely produced and marketed from them. The projected life expectancy of the reserves is based on the assumption that this practice will continue. Results of this forecast are used to determine the life expectancy of the P-C region's current reserves.

6. *Identification of Alternative Resources.* Alternative sources of aggregate to meet the forecasted 50-year demand are identified and briefly considered.

7. *Other Commodities.* Active mines, where commodities other than PCC-grade aggregate are produced, are located and classified MRZ-2 if they meet the minimum threshold value set by the State Mining and Geology Board. Resources at the site are not quantified beyond confirming this minimum value. This classification is site-specific where commercial mineral resource extraction occurs. It is not a classification of the entire P-C region for specific resources other than PCC-grade aggregate.

The Mineral Land Classification of the San Luis Obispo-Santa Barbara Production-Consumption Region was initiated in 1986 by the State Geologist. Portland cement concrete-grade aggregate resources of the area were selected for initial classification. Deposits suitable for PCC-grade aggregate were zoned and the volume of available material within them was quantified. All other known active mines within the P-C region were classified MRZ-2 for their particular product but were not quantified beyond the establishment of a threshold value.

Each PCC-grade aggregate deposit was evaluated separately, and then considered as part of a single production-consumption (P-C) region established on the basis of existing aggregate consumption patterns. The San Luis Obispo-Santa Barbara marketing region is served by one major production district (Sisquoc River) and several smaller production areas in San Luis Obispo County. DMG previously classified the Sisquoc River production area in response to a petition to the State Mining and Geology Board (Cole and Jensen, 1986).

Residents of the San Luis Obispo-Santa Barbara region have been fortunate in having adequate quantities of high-quality aggregate materials either locally or within a moderate distance. However, the amount of these materials available for future development is diminishing as active producers deplete their deposits and land containing suitable sand and gravel resources is utilized for urban development.

Brief Overview of Designation

This report constitutes the classification phase of the two-step process mandated by SMARA. The designation phase follows receipt and approval of this classification report by the State Mining and Geology Board. Designation is the formal recognition by the Board of areas

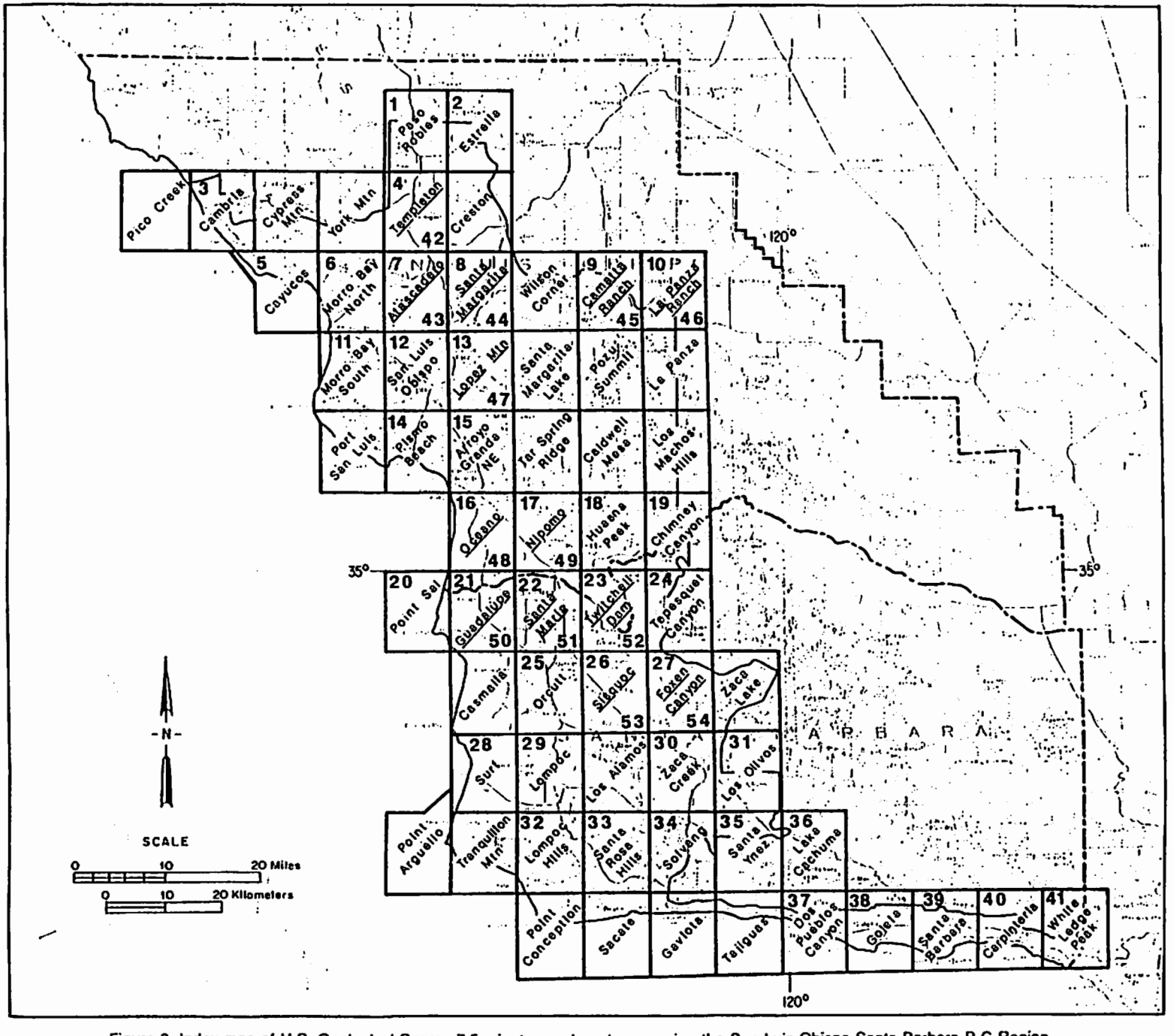


Figure 2. Index map of U.S. Geological Survey 7.5-minute quadrangles covering the San Luis Obispo-Santa Barbara P-C Region.

containing mineral deposits of regional or statewide significance that should be considered by lead agencies for protection from land uses incompatible with mineral extraction. Recognition is achieved by the adoption of regulations which designate certain deposits to be of prime importance in meeting the future needs of the region or the state. Designation is based upon this DMG report and consultation with lead agencies and other interested parties. Procedures for the designation of lands containing significant mineral deposits are specified in Section II.2 of the Board's Guidelines for Classification and Designation of Mineral Lands (California State Mining and Geology Board, 1983, p. 23).

Lead Agency Response to Classification

The State Mining and Geology Board, upon receipt of the classification information from the State Geologist, transmits the classification report to the appropriate lead agencies and makes it available to other interested parties. Within 12 months of receipt of the classification report, each lead agency must develop and adopt mineral resource management policies to be incorporated into its general plan. These policies will:

1. Recognize the mineral classification information, including the classification maps transmitted to the lead agency by the Board.

2. Emphasize the conservation and development of identified mineral deposits.

Overview of Aggregate Uses

Sand, gravel, and crushed stone are "construction aggregates." These commodities, collectively referred to as "aggregate," provide bulk and strength to Portland cement concrete, asphaltic concrete, plaster, and stucco. Aggregate is also used as road base, subbase, railroad ballast, and fill. Aggregate normally provides from 80 to 100 percent of the material volume in the above uses.

Aggregate material is essential to fulfill the needs of a modern society. It is a resource of great importance to the economy of any urbanizing area.

During 1987 over 3 million tons of construction aggregates worth approximately $11 million, were mined from the deposits within the San Luis Obispo-Santa Barbara P-C Region. Nearly 100 percent of this production was consumed within the P-C region boundaries. Approximately 37 percent of the aggregate produced from 1960 to 1987 was used as Portland cement concrete aggregate. This high-quality material was used in such things as concrete highways, dams, canals, airport runways, bridge abutments, buildings and their foundations, and general construction.

In this aggregate resource classification study, special emphasis is given to aggregate that meets the specifications used in making Portland cement concrete. The material specifications for PCC aggregate are more restrictive than the specifications for aggregate used in other applications. Deposits that are acceptable for use as PCC aggregate are the rarest and most valuable of aggregate resources. Aggregate produced from such deposits can be, and commonly is, used in other lower quality products. Because of this versatility, value, importance in construction, and relative scarcity, PCC-grade aggregate deposits are of major concern when planning for future availability of aggregate commodities.

Rarely is in-place aggregate (raw material) physically or chemically suited for every type of aggregate use. Every potential deposit must be tested to determine how much material can meet specifications for a particular use, and what processing is required. Specifications for various uses of aggregate material have been established by several agencies, such as the U.S. Bureau of Reclamation, the U.S. Army Corps of Engineers, and the California Department of Transportation (Caltrans), to ensure that aggregate is satisfactory for specified uses. These agencies and other major consumers of aggregate test aggregate for acceptance by standard test procedures defined by such organizations as the American Society for Testing Materials and the American Association of State Highway Officials.

Most aggregate specifications have been established to ensure the manufacture of strong, durable materials capable of withstanding the physical and chemical effects of weather and use. For example, specifications for Portland cement concrete and concrete products prohibit use of aggregate materials containing gypsum, pyrite, zeolite, opal, chalcedony, chert, siliceous shale, volcanic glass, and some high-silica volcanic rocks. Gypsum lengthens the setting time of Portland cement, pyrite dissociates to yield sulfuric acid and iron oxide stain, and other substances contain silica in a form that reacts with alkali substances in the cement, resulting in cracks and "pop-outs."

Specifications also call for precise particle-size distributions for the various uses of aggregate. Aggregate is commonly classified into two general sizes, coarse and fine. Coarse aggregate is rock retained on a 3/8" or a #4 U.S. sieve. Fine aggregate passes a 3/8" sieve and is retained on a #200 U.S. sieve (a sieve with 200 weaves per inch). For some uses, such as asphaltic paving, particle

shape is specified. The Standard Specifications issued by Caltrans (1988) requires that at least 25 percent by weight of coarse aggregate (1/4" to 3/4" diameter) used as Class 2 aggregate base material shall be crushed particles. Furthermore, aggregate base material used with bituminous binder (commonly called road tar) to form sealing coats on road surfaces shall consist of at least 90 percent by weight of crushed particles. Crushed stone is preferable to natural gravel in asphaltic concrete because asphalt adheres better to broken surfaces, and the interlocking of angular particles strengthens the asphaltic concrete and road base.

The preferred use of one aggregate material over another in construction practices depends not only on specification standards, but also on economic considerations. Alluvial gravel is preferred to crushed stone for Portland cement concrete aggregate because the rounded particles of alluvial sand and gravel result in a wet mix that is easier to work than a mix composed of angular fragments. The workability of a mix consisting of Portland cement with crushed stone aggregate can be improved by adding more sand and water, but more cement must then be added to the mix to maintain concrete durability standards. At the present time, the additional cement amounts to about a quarter of a 94-pound sack per cubic yard of concrete at an additional cost of about $1.00 per yard of mix. Although more care is required in pouring and placing a wet mix containing crushed stone, Portland cement concrete made with this aggregate is as satisfactory as that made with alluvial sand and gravel of comparable rock quality.

In the San Luis Obispo-Santa Barbara area, PCC-grade aggregate sells in bulk for about $5.70 per ton at the plant site (in January 1989.) However, this selling price reflects only part of the cost to the consumer. Transportation cost is a significant part of the final delivery price. In areas lacking nearby aggregate sources, delivery charges alone may be greater than the sale price of the material at the plant site.

Transportation Rates

Because it is a low-value, high bulk weight commodity, a major part of the cost of aggregate to the consumer is for transportation. In fact, transportation cost is the principal constraint defining the market area for a specific production district.

All aggregate marketed in the San Luis Obispo-Santa Barbara P-C Region is transported by truck. Minimum rates for independent aggregate truckers are set by the California Public Utilities Commission (PUC). Rates for the San Luis Obispo-Santa Barbara area are published in "Minimum Rate Tariff 7-A," Sections 2 and 3. Charges are calculated based on either an hourly rate (Table 1) or a distance rate (Figure 3). The minimum hourly rate or the minimum distance rate, whichever is larger, may be charged to the consumer. If the hourly rate is used, the carrier and debtor must enter into a written agreement prior to transport.

Figure 3 illustrates how the PUC rates increase with distance as specified in Minimum Rate Tariff 7-A. For example, hauling aggregate from the Sisquoc River production area to Santa Maria (approximately 11 miles) results in an additional cost of $2 per ton over the cost of the same material purchased F.O.B. mine site. To haul aggregate to Santa Barbara from the Sisquoc River production area would increase its cost by approximately $8-9 per ton, demonstrating the economic importance of maintaining accessible local sources.

Table 1. Minimum hourly rates for transport of aggregate in the San Luis Obispo-Santa Barbara area. From California Public Utilities Commission, 1987. Minimum Rate Tariff 7-A (current rates as of August 1, 1987).

TYPICAL TONS PER LOAD	NO. OF AXLES PER UNIT OF EQUIPMENT	*HOURLY RATES ($)	$/HR/TON
10	2	42.23	4.22
15	3	47.90	3.19
24	4	50.47	2.10
26	5+	53.33	2.05

*Rates are higher for work done on holidays and weekends

Figure 3. Minimum distance rates for trucking aggregate within the San Luis Obispo-Santa Barbara P-C Region.

DETERMINATION OF THE SAN LUIS OBISPO-SANTA BARBARA PRODUCTION-CONSUMPTION REGION

Initially, the city of Santa Barbara and the adjoining urban areas were targeted by the Office of Planning and Research (OPR) as areas experiencing significant urban expansion, and were scheduled by the State Mining and Geology Board for a SMARA classification study. Subsequently, the Board included the urban centers in San Luis Obispo County and northern Santa Barbara County in the list of areas to be classified under SMARA. Although San Luis Obispo and Santa Barbara counties were considered as separate production-consumption (P-C) regions at the outset of the study, preliminary work demonstrated that all of the major urban areas within the two counties should be included in a single P-C region.

The boundary of the study area (P-C region) was delineated to include the urban and urbanizing areas targeted by OPR and the Board, and the high-grade aggregate production districts supplying those areas. This initial target was updated and enlarged through consultation with local lead agencies and examination of their General Plans, so that all areas in the path of urban expansion were included within the P-C region. The boundary includes most of the population which consumes the aggregate mined from the production districts, even if this population is located outside the target areas. Less than 1 percent of the output of the production districts is exported for consumption outside of the P-C region. The boundary of the study area was drawn using the General Plans of the lead agencies and observations of current land-use patterns.

The San Luis Obispo-Santa Barbara P-C Region is served by one major and five smaller production areas which supply Portland cement concrete aggregate. The major production district is located on the Sisquoc River east of the city of Santa Maria. This district produces nearly 80 percent of the PCC aggregate for the region. The five smaller production areas, all within San Luis Obispo County, are located east of Atascadero in Rocky Canyon, northeast of the community of Santa Margarita next to the Salinas River, northeast of Cambria along San Simeon Creek, along Navajo Creek in northeastern San Luis Obispo County, and along Pine Canyon near the Cuyama River.

The cities of Santa Barbara and Carpinteria and the surrounding urban areas are also supplied with aggregate from producers within the adjacent Western Ventura County P-C Region. Although the amount of aggregate imported is only about 10 percent of the total demand for the San Luis Obispo-Santa Barbara P-C Region, it is an important source for the Santa Barbara area. The closest production district within the P-C region which can supply PCC aggregate is about 75 miles away - the Sisquoc River production district. The cost of transporting aggregate from the Sisquoc River area to the Santa Barbara area is about twice as much as importing it from the Western Ventura County P-C Region.

The area in and around the city of Paso Robles receives PCC aggregate from a production district in Fresno County near the town of Coalinga. This imported material makes up but a small fraction of the total consumption for the San Luis Obispo-Santa Barbara P-C Region.

Table 2. Lead agencies (county and incorporated city governments and military bases) located within the San Luis Obispo-Santa Barbara P-C Region.

City of Arroyo Grande	City of San Luis Obispo
* +City of Atascadero	City of Santa Barbara
City of Carpinteria	+City of Santa Maria
City of Grover City	+City of Solvang
City of Guadalupe	* +County of San Luis Obispo
City of Lompoc	* +County of Santa Barbara
City of Morro Bay	United States Air Force,
* +City of Paso Robles	Vandenberg Air Force Base
City of Pismo Beach	

+Agencies that have land classified as MRZ-2 for PCC-grade aggregate or other commodity within their jurisdiction.

* Agencies that have active aggregate operations within their jurisdiction.

Agencies with sectors within their jurisdiction are underlined.

The production-consumption region was delineated to encompass: 1) the metropolitan areas of the 13 incorporated cities; 2) outlying communities such as Santa Margarita, Nipomo, and Goleta, and those areas which are anticipated to urbanize within the next 50 years; 3) rural areas and small towns that, although not anticipated to urbanize in the foreseeable future, collectively consume a significant percentage of the region's aggregate production; and, 4) the production districts identified in this study. The P-C region boundary was, in many places, located along the most suitable census tract boundary to allow use of existing population data for forecasting. Lead agencies with jurisdiction within the P-C region are shown in Table 2.

ESTABLISHMENT OF MINERAL RESOURCE ZONES

DMG has classified 2,062 square miles of land in the San Luis Obispo-Santa Barbara P-C Region according to the presence or absence of significant PCC-grade aggregate deposits. The land classification is presented in the form of Mineral Resource Zones, or MRZ's. Directions for the identification of Mineral Resource Zones are set forth in DMG's Special Publication 51 in the section "Guidelines for Classification and Designation of Mineral Lands" (California State Mining and Geology Board, 1983). The guidelines for establishing the Mineral Resource Zones are as follows:

MRZ-1 Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. This zone shall be applied where well-developed lines of reasoning, based upon economic-geologic principles and adequate data, demonstrate that the likelihood for occurrence of significant mineral deposits is nil or slight.

MRZ-2 Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists. This zone shall be applied to known mineral deposits or where well-developed lines of reasoning, based upon economic-geologic principles and adequate data, demonstrate that the likelihood for occurrence of significant mineral deposits is high.

MRZ-3 Areas containing mineral deposits, the significance of which cannot be evaluated from available data.

MRZ-4 Areas where available information is inadequate for assignment to any other MRZ.

Mineral Resource Zones in the San Luis Obispo-Santa Barbara P-C Region are presented on forty-one 1:48,000 reductions of U.S. Geological Survey 7.5-minute topographic quadrangle maps (Plates 1–41). Figure 2 shows the quadrangle maps that cover the San Luis Obispo-Santa Barbara P-C Region.

Mineral Resource Zones within the San Luis Obispo-Santa Barbara P-C Region were established on the basis of an aggregate appraisal that included the following tasks for assessing the quantity, quality, and extent of the aggregate deposits:

1. Examination and compilation of relevant geologic maps, aerial photos, geologic literature, aggregate industry data (some of which is proprietary), and aggregate engineering test data. The geologic maps used in classification of the San Luis Obispo-Santa Barbara P-C Region are indicated on Figure 4. Plate 56 shows the generalized geology and geologic columns of the San Luis Obispo-Santa Barbara area.

2. Interviews with aggregate operators and company geologists.

3. Compilation and analysis of subsurface water well-log data and drilling records.

4. Field investigation of active and depleted aggregate quarries and the geologic formations which could contain aggregate resources.

Areas Classified as MRZ-1

Areas classified as MRZ-1 were judged, on the basis of available data, to have little likelihood of containing significant deposits of PCC-grade aggregate. Deposits that have excessive amounts of clay, silt, organic matter, absorptive rock, alkali-reactive rock, platy rock, or soft rock are unsuitable for use in PCC aggregate. Areas containing such deposits are classified MRZ-1.

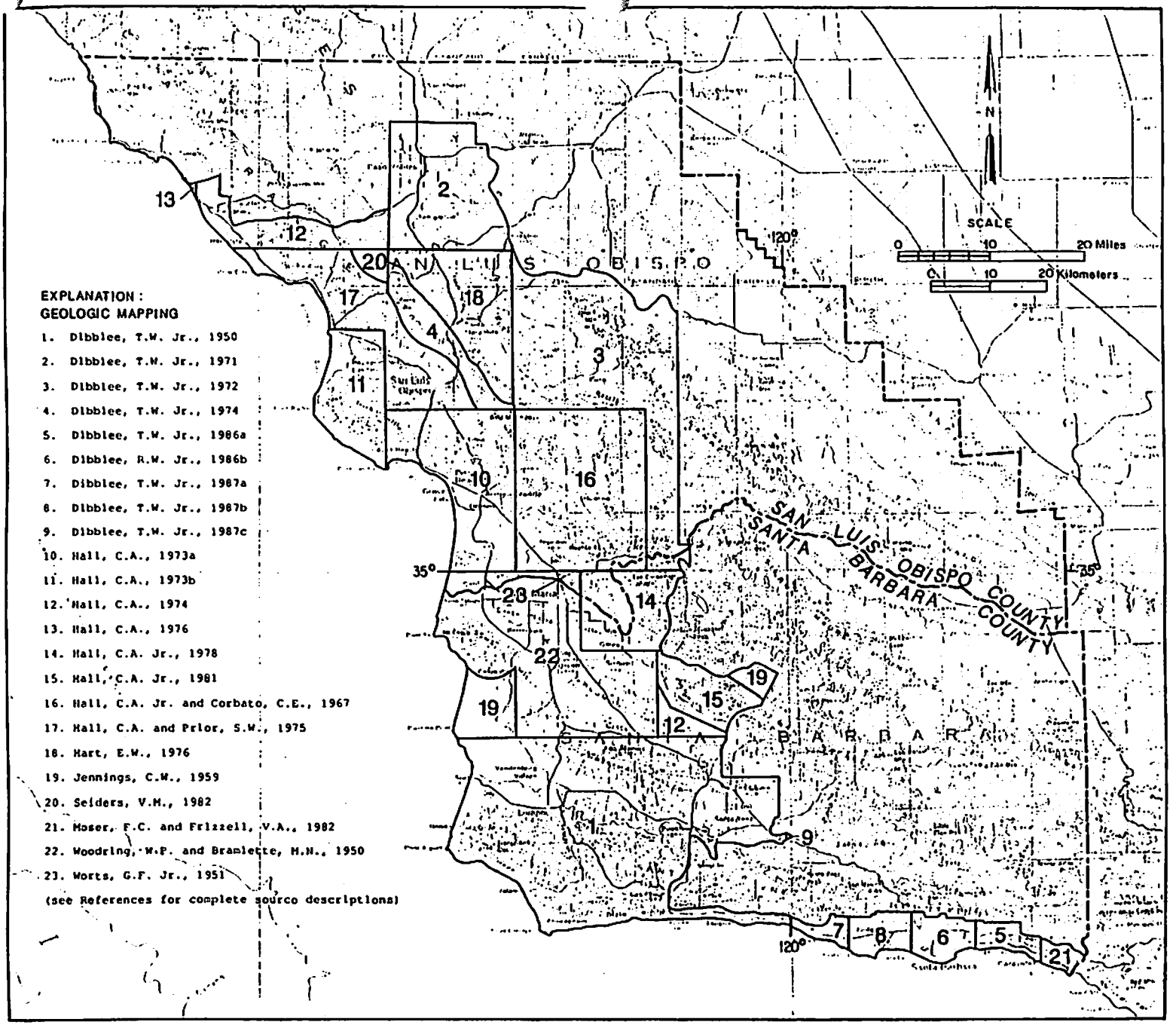


Figure 4. Index to geologic mapping used in the classification of the San Luis Obispo-Santa Barbara P-C Region.

Areas Classified as MRZ-2

Five areas are classified as MRZ-2 for PCC-grade aggregate in the San Luis Obispo-Santa Barbara P-C Region. These are areas for which data indicate that there is a high likelihood that significant deposits of PCC-grade aggregate exists.

SMARA guidelines set forth two requirements to be used to determine if land should be classified MRZ-2:

1. The deposit must be composed of material that is suitable as a marketable commodity.

2. The deposit must meet the threshold value. The projected value (gross selling price) of the deposit, based on the value of the first marketable product, must be at least $9,200,000 (which equates with 5 million 1978-dollars).

Areas classified MRZ-2 for PCC-grade aggregate contain resources that are either proven PCC grade or highly probable to be PCC grade. Some of the aggregate in the MRZ-2 areas have not been identified as PCC-grade aggregate through formal engineering tests. Aggregate deposits in untested, unproven areas identified as MRZ-2 are believed to contain PCC-grade aggregate for either of the following reasons:

- The aggregate in unproven areas is similar in age, lithology, and depositional environment to that in areas containing proven PCC-grade aggregate.

- The unproven deposit is a lateral extension of an alluvial formation from which PCC-grade aggregate has been produced.

Seventy-two square miles have been classified as MRZ-2 for PCC-grade aggregate in the San Luis Obispo-Santa Barbara P-C Region.

Areas Classified as MRZ-3

Areas classified as MRZ-3 contain aggregate deposits, the significance of which cannot be evaluated from available data.

Coarse-grained sedimentary units and igneous rock types are often included in this category. Evidence obtained from geologic literature or petrologic field investigations that show a rock unit to contain abundant, hard, durable material without excessive amounts of deleterious materials is necessary for it to be considered a suitable candidate for an MRZ-3 classification. Additional information, including engineering test data on physical and chemical quality, regarding the material in these areas could either upgrade the classification to MRZ-2 or downgrade the classification to MRZ-1.

Some alluvial deposits are also classified MRZ-3. In the Santa Maria Valley and in several active stream channels such as the Sisquoc River there are areas for which too little information is available to classify as either MRZ-2 or MRZ-1, although well-log information indicates that aggregate resources are present.

Areas Classified as MRZ-4

Areas classified as MRZ-4 are those for which available information is lacking or incomplete for assignment into the other MRZ categories. No areas were classified as MRZ-4 in the San Luis Obispo-Santa Barbara P-C Region.

EVALUATION OF PCC-GRADE AGGREGATE IN THE SAN LUIS OBISPO-SANTA BARBARA P-C REGION

An assessment of aggregate resources in the San Luis Obispo-Santa Barbara P-C Region is presented in this section of the report. The assessment was conducted on the basis of a quantitative evaluation of suitable aggregate resources classified as MRZ-2.

Concepts Used in Identifying Available Aggregate Resource Areas

The State Geologist is responsible for calculating aggregate resources for those areas classified as MRZ-2 for PCC-grade aggregate. Recognizing that there are lands within MRZ-2 areas that have already been urbanized and therefore have a limited opportunity for mineral resource conservation and extraction, the State Geologist has limited the calculation of aggregate resource tonnages to areas classified as MRZ-2 for PCC-grade aggregate that have not been urbanized.

For purposes of classification, incompatible uses of land are defined as improvements of high cost, such as high-density residential developments, intensive industrial developments, commercial developments, and major public facilities (see Appendix). In addition, lands for which the lead agency has approved a tract map or issued an approved Specific Plan are treated as having uses that are incompatible with mining. Lands that have compatible uses are defined as those that are nonurbanized or that have very low density residential development (one unit per ten acres), land that does not have high-cost improvements, and lands used for agriculture, silviculture, grazing, or open space.

For this report, determination of use of lands classified as MRZ-2 for PCC-grade aggregate was based upon conditions of the lands at the time of the study (1986 through 1989). The use of the lands was determined after review of data from lead agencies, reference to aerial photographs and photo-revised topographic maps, and field reconnaissance.

SECTORS

Sectors are areas that have been classified as MRZ-2 for PCC-grade aggregate by the State Geologist and are deemed to be available for mining based upon criteria for compatibility provided by the State Mining and Geology Board and outlined above.

A sector is an area in which the geometrical configuration of the deposit is sufficiently regular to permit reliable calculation of the tonnage of the mineral resource present. For example, sector boundaries would be established between that part of a natural deposit formed on a fan, and that part within the confines of an adjacent modern stream channel and its floodplain. Sectors are often divided into subsectors to exclude major pipelines, transmission lines, canals, and roads. These sectors and subsectors have been employed to focus the attention of land-use planners and local governments on areas that remain accessible for mineral extraction. Mineral land classification, which is done without regard for current land uses, by itself, does very little to put into perspective the resource base that is available to meet the future needs of a region. The State Geologist calculates the available resources of each sector and identifies the amount of remaining resources that have been permitted for mining. A more specific term for these permitted resources is *reserves*. The resources present in non-sectorized MRZ-2 areas are not calculated because they are regarded as unavailable.

The calculated reserves and resources of all sectors in a region are compared with the State Geologist's forecast of the 50-year needs of that region. The comparison of regional needs with available reserves and resources provides the opportunity to focus attention on the mineral resource issues confronting the region, such as the need to plan carefully for the use of any lands containing mineral resources, and the need to consider the permitting of additional mining operations in the region as currently mined deposits are depleted.

Each sector meets or exceeds the Board's threshold values for deposits of significant size, and each sector may be considered for designation as an area of regional or statewide significance by the State Mining and Geology Board, pursuant to Section 2790 of SMARA. Areas that have not been sectorized by the State Geologist are not considered for designation by the Board.

Although the classification by the State Geologist and the designation by the Board are actions explicitly provided for by SMARA, and although the results of such actions yield reports that must be acted upon by affected local governments, the sectorization and sector maps do not of themselves carry specific obligations imposed on local governments by SMARA. The maps and resource base calculations, however, do contain the essential facts that are needed to focus the attention of planners on the mineral availability problems and the alternative sources of aggregate to meet the mineral resource needs of the region. Without the sector maps and the accompanying

calculations, the primary objectives of SMARA could not be achieved.

The Board's criteria for sectorization focus on the apparent suitability of the land for mining and do not take into account conflicting commitments that may restrict the suitability of some sectors for mining. It is possible that the available resource base as calculated by the State Geologist may be an overestimation and the problems confronting local government may be understated. Considering these possibilities, it becomes important for local governments to carefully review the sectors and estimate resources to ensure that planning decisions are made using a correct perspective on available resources.

Calculation of Available Resources

RESERVES AND RESOURCES

In this report, *reserves* are calculations of tonnages of aggregate that have been determined to be acceptable for commercial use, that exist within properties owned or leased by aggregate producing companies, and for which permits have been granted to allow mining and processing of the material. *Resources* include reserves as well as all potentially usable aggregate materials that may be mined in the future, but for which no permit allowing mining has been granted, or for which marketability has not been established.

FACTORS CONSIDERED IN CALCULATIONS

The resource calculations given here are limited to those PCC-grade aggregate resources present in resource sectors which are, as explained in the previous section, the nonurbanized portions of the areas classified as MRZ-2 for PCC-grade aggregate. The resource sectors defined in this study are shown on the sector maps (Plates 42-54) that accompany this report. Deposits where mineral resources other than PCC-grade aggregate are currently mined have also been classified, but are not quantified beyond establishment that they exceed threshold value. These deposits have not been sectorized since their regional significance has not been studied.

Each sector is identified by a capital letter and represents a resource area or a portion of a resource area which appears to have a fairly consistent geometrical configuration and identical geologic parameters. The sectors are subdivided into numbered subsectors to exclude the locations of existing freeways, other major roads, canals, bridges, dams, major power lines, and major pipelines. These criteria allow for the calculation of realistic resource tonnages.

The following factors were used to determine the areal extent and tonnage of PCC-grade aggregate resources within the sectors:

1. Sector resource tonnage calculations were based on measurements taken from base maps that have a scale of 1:24,000 or maps obtained from aggregate companies with varying scales.

2. Even in proven PCC-grade aggregate deposits, a small percentage of the aggregate cannot be used in concrete and is referred to in this study as "waste." Waste includes pit-run and production waste, both of which may be utilized in non-PCC uses, primarily fill. Known waste percentages were extrapolated to deposits in untested sector areas from proven, nearby PCC-grade aggregate deposits.

3. Thicknesses of PCC-grade aggregate deposits were determined through analysis of water well-log data, examination of active aggregate pits and natural outcrops, and other information provided by persons who have knowledge concerning aggregate deposits in this region.

4. A standard setback of 100 feet from utility and rail lines and urban developments was used in determining the areal limits of sectors that border areas not available for mining.

5. Side slopes were generally calculated to have a 1:1 gradient, or, if the deposit was permitted for mining, the side slopes of the mining plan.

6. In-place densities of 0.055 and 0.060 tons per cubic foot were assumed in calculating alluvial resources, and .084 tons per cubic foot was assumed in calculating the granitic, crushed stone resources.

7. Overburden, if present, was subtracted from the thickness of the deposit.

Resource Sector Descriptions

Five resource sectors (A - E) have been identified in the San Luis Obispo-Santa Barbara P-C Region. The total area of the resource sectors in the P-C region is 57 square miles, of which 2.1 square miles are currently permitted for mining PCC-grade aggregate.

Resource Sector A is located along the Salinas River near the cities of Paso Robles and Atascadero; Sector B is located in Navajo Creek, about 20 miles east of Santa Margarita; Sector C covers part of the La Panza granitics

east of Atascadero and Santa Margarita; Sector D covers a large part of the Santa Maria River near the city of Santa Maria; and Sector E covers the Sisquoc River.

The aggregate resources in these five sectors consist of alluvial channel, floodplain, and crushed stone deposits. The estimated total PCC-grade aggregate resources in all of the sectors is 11,175 million tons. The reserves and resources for the individual sectors are shown on Tables 3 - 7. The parameters used in calculating these figures include: slopes of 1:1 gradient, in-place densities of 0.055 and 0.060 tons per cubic foot for alluvial deposits (depending on site specific conditions), and 0.084 tons per cubic foot for the crushed stone deposits, waste percentages varying from 3 to 55 percent, and a setback of 100 feet from roads and other development features.

Two areas that contain PCC-grade aggregate resources have not been sectorized. The San Simeon Creek and Pine Canyon deposits each contain less than the threshold value of aggregate material and have been classified as MRZ-3.

SECTOR A - SALINAS RIVER

Sector A includes the recent river channel deposits and parts of the adjacent floodplain deposits along about 14 miles of the Salinas River, from the southeastern boundary of the city of Atascadero to the southern boundary of the city of Paso Robles. Sector A includes three subsectors which together cover an area of 2,014 acres. The alluvium in the Salinas River generally consists of an upper layer of mostly sand and a lower section of one or more gravel layers separated by clayey layers. The upper sand deposit varies in thickness from 15 to 35 feet and the lower gravelly section ranges in thickness from 20 to 50 feet. The total depth of the alluvium is from 50 to 80 feet. The well-log data are sparse upstream of Sector A, but the logs of two wells about one mile upstream indicate that the overburden of soil and fine material is much thicker and the gravel layer is very thin. Downstream, or north of the sector, well-log data indicate that there are several clayey layers in the alluvium underlying much of the floodplain. The older floodplain underlying the terraces along this part of the river, and the most recent stream channel may have fewer clayey layers, but not enough data are available to delineate such areas.

Goldman (1968) reported that the gravel in the Salinas River consists of 31 percent sedimentary rocks, 21 percent granitic rocks, 27 percent volcanic and fine-grained igneous rocks, 13 percent quartz and quartzitic rocks, 7 percent shale from the Monterey Formation, and 1 percent metamorphic rocks. The pieces of shale from the Monterey Formation are reactive in concrete and are therefore considered to be deleterious. The removal of shale fragments from the aggregate material must be accomplished to make it acceptable for Portland cement concrete.

The first sand and gravel plant in this area was built near Templeton in 1915. In the years since, there have been at least a dozen aggregate pits operating along the Salinas River within or near Sector A. Currently there are six producers of aggregate in Sector A; The Dirtman, Salinas Sand Company, Slash Bar G Dump Truck and Loader Service, Steve Schmidt, Union Asphalt Inc., and Weyrick Sand and Gravel.

Although the deposits in Sector A are classified as MRZ-2 for Portland cement concrete aggregate, aggregate that meets the specifications for use in PCC is not being produced at present by any of the operators in the sector. Concrete sand and gravel have been produced in the past (Goldman, 1968) but they probably would not have met present day specifications for PCC aggregate without additional processing. However, testing at two locations in the sector indicates that the aggregate material in the Salinas River can be processed to yield PCC-grade sand. It is estimated by an operator in the Salinas River that as much as 45 percent of the sand can be used, after processing, for Portland cement concrete aggregate. Most of the remainder of the material can be used as other grades of construction aggregate. Because the aggregate from the permitted mines in Sector A is not currently processed for use in PCC, the reserves for PCC-grade aggregate from those mines are defined to be zero.

The sand deposits in this part of the Salinas River are significant because of their proximity to the growing urban areas in the northern part of the San Luis Obispo-Santa Barbara P-C Region. At present, some PCC aggregate is being imported to this part of the region from near Coalinga in Fresno County. The two crushed stone quarries that serve the northern part of the region (Union Asphalt, Inc, Rocky Canyon Quarry and Southern Pacific Milling Company Santa Margarita Quarry) can produce a "rock dust" sand, but a source of natural sand of PCC quality in the same area would be important to augment the crushed stone products of the two quarries. The other nearest significant sources of PCC-grade sand are Navajo Creek, about 20 miles east of Atascadero, and the Sisquoc River, about 55 miles to the south.

It is anticipated that beneficiation of sand from the Salinas River to meet PCC specifications will probably occur in the foreseeable future.

Table 3. PCC-grade sand resources in Sector A.

SUB SECTOR	TOTAL ACRES	ACRES PERMITTED FOR PCC-GRADE	THICK-NESS (feet)	PERCENT PCC GRADE	PCC-GRADE RESERVES (tons)	PCC-GRADE RESOURCES (tons)
A-1	752	0	30	45	0	21,600,000
A-2	717	0	30	45	0	20,600,000
A-3	545	0	30	45	0	15,700,000
SUBTOTALS	2,014	0			0	57,900,000

SECTOR B - NAVAJO CREEK

Sector B covers 135 acres of the active channel and floodplain of Navajo Creek, beginning one-and-a-half miles south of the Highway 58 crossing and extending for about two miles upstream. The area classified as MRZ-2 is entirely within the lease boundary of the Navajo Rock and Sand Company. The alluvial deposit is 42 feet thick and is composed of about 60 percent sand and 40 percent gravel. The gravel consists mainly of quartzite cobbles with some granitic rocks. The maximum size of the cobbles is about 10 inches. A waste factor of 15 percent and a density of 0.055 tons per cubic foot were used in calculating the reserves and resources in the sector.

Upstream of the sector the amount of alluvium deposited in the canyon is too small to be economically minable. Downstream of the sector there is little information available as to the quality of the material; but, from field observations, the material appears to be finer-grained, to have a higher clay content, and to have a higher content of deleterious shale fragments from the Monterey Formation.

Mining in this area first began in the 1800's when the alluvium was placer mined for gold. A gold placer operation was reported on Navajo Creek in 1925. Sand and gravel mining did not start on Navajo Creek until 1976.

The reserve and resource data for this sector are proprietary. The reserve total for Sector B is included with the P-C region total on Table 7.

SECTOR C - LA PANZA GRANITICS

Sector C, which covers 12,238 acres, is underlain by granitic rocks of granodioritic and quartz monzonitic composition. Sector C lies southeast of the city of Atascadero. There are up to 700 feet of topographic relief in the sector. Sector C is separated into three subsectors, C-1, C-2, and C-3. Parts of subsector C-1 are leased by Union Asphalt, Inc., a subsidiary of Coast Rock Products, Inc., and Southern Pacific Milling Company (formerly Kaiser Sand and Gravel Company). After stripping off the weathered surface material, which can be as thick as 50 feet, the underlying fresh, hard rock is quarried and crushed for aggregate. Aggregate production began at the Union Asphalt, Inc. Rocky Canyon quarry in 1983. Crushed stone for aggregate and riprap has been intermittently quarried at the Southern Pacific Milling Company Santa Margarita Quarry since the early 1920's. There is a third small quarry, the Davis Quarry, immediately south of the Rocky Canyon Quarry in subsector C-1. The Davis Quarry intermittently produces road base from the weathered surface material of the granitics.

In calculating the reserves and resources for Sector C, the quarrying procedures presented in the County of San Luis Obispo's Reclamation Plan Guidelines were followed for benching configurations. A density factor of 0.084 tons per cubic foot and a waste percentage of 3 percent were used to calculate total tonnages. These two factors were derived from company data. The resources of crushed stone available in Sector C are calculated to total 6,119 million tons. The reserve total for Sector C is confidential but is included with the P-C region total on Table 7.

SECTOR D - SANTA MARIA RIVER

Sector D includes 17,758 acres (27.7 square miles) of land in the river channel and floodplain of the Santa Maria River. The area includes lands in both San Luis Obispo and Santa Barbara counties. The sector extends

from the confluence of the Sisquoc and Cuyama rivers, about 6 miles east of the community of Sisquoc, to one-half-mile east of Highway 1, about 4 miles from the coast.

Sector D contains the largest resources of PCC-grade aggregate in the San Luis Obispo-Santa Barbara P-C Region. Sector D, with its 37 subsectors, contains 4,528 million tons of PCC-grade aggregate resources. Eighty-nine percent of the available alluvial sand and gravel resources in the P-C region is contained in this one sector.

Five companies mine aggregate from the Santa Maria River channel. Four of them are located north of the city of Santa Maria and do not produce PCC-grade aggregate. They are River Sand and Gravel, Inc., in subsectors D-8 and D-13, Sanchez and Sons, Inc., in subsector D-13, Santa Maria Sand Company in subsector D-8, and Troesh Ready-Mix Company in subsectors D-7 and D-8. The fifth, Coast Rock Products, Inc., southeast of Santa Maria, produces PCC aggregate from property in subsector D-13. The reserves of PCC-grade aggregate in Sector D are confidential, but are included in the total on Table 7.

Water-well logs in the Santa Maria River, from the confluence of the Sisquoc and Cuyama rivers to about 8 miles downstream, all in subsector D-13, show a persistent clay layer in the lower part of the unstratified surface layer. The unstratified surface layer of sand and gravel in this area ranges in thickness from 65 to 100 feet. In the broad floodplain of the Santa Maria River, south of the recent channel in subsectors D-10 through D-32 (excluding subsector D-13), there are discontinuous layers of clay and clayey strata in the upper 100 to 150 feet of sand and gravel. In areas where these clayey layers are predominant enough to make mining of the alluvium uneconomical, they have been classified as MRZ-1. In areas where well-log data indicate a pattern of both economical and uneconomical deposits, but with no clear dividing lines between them, they have been classified as MRZ-3.

West of the city of Santa Maria (subsectors D-1 through D-14), clay layers are more numerous and continuous in the upper part of the alluvium; the upper layer of alluvium is predominantly sand and is generally from 20 to 45 feet in thickness. Even though this aggregate is more difficult to mine than deposits to the east, it can still be used to make PCC. The cross sections on Plates 59 and 60 may be referred to for the subsurface geology of Sector D.

Table 4. PCC-grade crushed stone resources in Sector C.

SUB-SECTOR	TOTAL ACRES	ACRES PERMITTED FOR PCC-GRADE	THICK-NESS (feet)	PERCENT PCC-GRADE	PCC-GRADE RESERVES (tons)	PCC-GRADE RESOURCES (tons)
C-1	6,734	212	200-700	97	*	3,367,000,000
C-2	2,274	0	200-400	97	0	1,137,000,000
C-3	3,231	0	200-500	97	0	1,615,000,000
SUBTOTALS:	12,239	212			*	6,119,000,000

* Proprietary data

Table 5. PCC-grade aggregate resources in Sector D.

SUB SECTOR	TOTAL ACRES	ACRES PERMITTED FOR PCC-GRADE	THICK NESS (feet)	PERCENT PCC GRADE	PCC-GRADE RESERVES (tons)	PCC-GRADE RESOURCES (tons)
D- 1	938	0	90	90	0	190,400,000
D- 2	1,667	0	80	90	0	305,900,000
D- 3	466	0	70	90	0	74,100,000
D- 4	1,138	0	100	90	0	259,800,000
D- 5	337	0	120	90	0	87,800,000
D- 6	599	0	110	90	0	144,800,000
D- 7	390	0	130	90	0	109,800,000
D- 8	127	0	130	90	0	34,100,000
D- 9	300	0	25	90	0	17,400,000
D-10	781	0	120	90	0	207,400,000
D-11	1,313	0	130	90	0	383,800,000
D-12	27	0	100	90	0	5,100,000
D-13	2,385	409	130	90	*	678,800,000
D-14	152	0	140	90	0	42,200,000
D-15	277	0	80	90	0	49,400,000
D-16	394	0	90	90	0	78,600,000
D-17	51	0	210	90	0	15,400,000
D-18	414	0	130	90	0	117,500,000
D-19	16	0	240	90	0	2,900,000
D-20	1,063	0	150	90	0	356,200,000
D-21	424	0	120	90	0	109,900,000
D-22	57	0	200	90	0	19,900,000
D-23	249	0	110	90	0	58,900,000
D-24	1,058	0	120	90	0	283,200,000
D-25	137	0	130	90	0	35,500,000
D-26	48	0	180	90	0	14,700,000
D-27	39	0	180	90	0	12,300,000
D-28	346	0	90	90	0	68,000,000
D-29	255	0	160	90	0	85,700,000
D-30	96	0	200	90	0	36,700,000
D-31	199	0	115	90	0	48,400,000
D-32	612	0	130	90	0	176,500,000
D-33	75	0	120	90	0	18,400,00
D-34	24	0	100	90	0	50,900,000
D-35	205	0	75	90	0	34,400,000
D-36	971	0	130	90	0	280,100,000
D-37	128	0	130	90	0	33,100,000
SUBTOTALS						
	17,758	409			*	4,528,000,000

* Proprietary data

SECTOR E - SISQUOC RIVER

Sector E consists of four subsectors totaling an area of 3,742 acres of the river channel and floodplain of the Sisquoc River. Sector E extends along the Sisquoc River from a point 7 miles east of the community of Sisquoc, downstream to the confluence of the Cuyama River. Sector E contains 470 million tons of PCC-grade aggregate resources.

The Sisquoc River area was previously classified by DMG in response to a petition. The information in that report (Cole and Jensen, 1986) was used in this report with no changes in the boundary of the area classified as MRZ-2 for PCC-grade aggregate.

Sector E contains the largest reserves of PCC-grade aggregate in the region even though Sector D contains a far greater tonnage of aggregate resources. Two mining companies, Coast Rock Products, Inc., (subsectors E-1, E-3, and E-4) and Kaiser Sand and Gravel Company (subsectors E-1 and E-2), have large holdings along the Sisquoc River. These companies are presently mining aggregate from the active river channel, but they have also mined aggregate from the floodplain south of the active river channel.

Mining of aggregate in the Sisquoc River area was reported as early as 1924 (Tucker, 1925). Coast Rock Products, Inc., has been mining aggregate here since 1957. Kaiser Sand and Gravel Company took over the property of Southern Pacific Milling Company in 1980 and has been mining here since that time. Distribution of PCC aggregate from these two plants reaches as far as the community of Goleta, 70 miles to the south and the city of Cambria, 75 miles to the north.

The rock types recognized within the river channel deposits mined include well-lithified sedimentary conglomerate and breccia, coarse-grained arkosic and lithic sandstone, fine- to medium-grained quartzose sandstone, volcanic breccia, quartzite, basic igneous rock, fine- to medium-grained plutonic rock with a silicic to intermediate composition, chert, and tuffaceous and porcelaneous shale. The shale makes up about 5 to 20 percent of the alluvial material and must be removed during the processing of the PCC aggregate. The shale is removed by using a heavy media separator and a sand sorter and is marketed separately as chip seal.

Water-well logs in the Sisquoc River indicate that the upper portion of the alluvium consists of a relatively unstratified layer of sand, gravel, and boulders. The thickness of this surface layer varies from about 25 feet in the upstream end to about 70 feet near the Cuyama River. Below this relatively unstratified layer are alternating stratified layers of sand, sandy clay, gravel, and clay which typically range in thickness from 1 to 10 feet.

Table 6. PCC-grade aggregate resources in Sector E.

SUB-SECTOR	TOTAL ACRES	ACRES PERMITTED FOR PCC-GRADE	THICK-NESS (feet)	PERCENT PCC-GRADE	PCC-GRADE RESERVES (tons)	PCC-GRADE RESOURCES (tons)
E-1	1,663	298	70	95	*	269,600,000
E-2	94	0	85	95	0	17,900,000
E-3	1,265	221	50	95	*	144,400,000
E-4	720	63	25	95	*	38,300,000
SUBTOTALS	3,742	582			*	470,200,000

*Proprietary data

Table 7. Total PCC-grade aggregate resources in the San Luis Obispo-Santa Barbara P-C Region.

SECTOR	TOTAL ACRES	ACRES PERMITTED FOR PCC-GRADE	PCC-GRADE RESERVES (tons)	PCC-GRADE RESOURCES (millions of tons)
A	2,014	0	0	58 (sand)
B	135	135	*	* (sand and gravel)
C	12,239	212	*	6,119 (crushed stone)
D	17,758	409	*	4,528 (sand and gravel)
E	3,742	582	*	470 (sand and gravel)
GRAND TOTALS	35,888	1,338	107	11,175 **

* Proprietary data.
** Does not include resources in Sector B

PCC-grade Aggregate Deposits below Minimum Threshold Value

SAN SIMEON CREEK

Although Morro Rock and Sand Company actively mines PCC aggregate in San Simeon Creek, the deposit has been classified as MRZ-3. The amount of aggregate resources available here has been determined to be below the minimum threshold value as required by the State Mining and Geology Board. Even though the deposit does not meet this criterion of regional significance, the deposit is locally important to the Cambria area. PCC aggregate not supplied to the Cambria area by the San Simeon Creek deposit must be hauled 70 miles from the Sisquoc River.

The California Department of Fish and Game limits mining on San Simeon Creek to the gravel bars above the low water line. Therefore, the supply is dependent on replenishment by flooding in the creek.

The maximum size of the aggregate in the creek channel is about 6 inches in diameter and there are abundant cobbles over 2 inches in diameter. About 70 percent of the material is gravel-sized with the remainder being sand. The most abundant rock types represented in the gravels are graywacke and greenstone. There are also fragments of chert, serpentine, siltstone, sandstone, and schist; however the deposit does not require extensive processing or flotation to remove deleterious clasts.

PINE CANYON

The streambed of Pine Canyon contains aggregate material of PCC quality. However, the quantity of resource that is known to be available here does not meet the minimum threshold value as set by the Board.

The known deposit extends from the mouth of Pine Canyon, at the Highway 166 crossing, to about 1 mile upstream. While no mining is currently taking place, mining of aggregate, including small amounts of PCC aggregate, has taken place in this area since the late 1970's. Pine Canyon Rock, Inc., was the last company to mine here. The depth of mining in this deposit is limited by a major pipeline, buried at a depth of 15 feet, which crosses the canyon about one-quarter mile upstream of the canyon mouth.

The maximum size of the aggregate is about 1 foot in diameter and the average size is about 3 to 4 inches in diameter. The rock types of the cobbles commonly are sandstone, limestone, and quartzite.

CLASSIFICATION OF ACTIVE MINES PRODUCING OTHER MINERAL COMMODITIES

The entire P-C region has been classified for PCC-grade aggregate. Additionally, during this study, sites of active production of other commodities were encountered. It was decided that deposits which contain active mining operations, regardless of the type of mineral commodity produced, would also be classified as MRZ-2. The reserves and resources at most of these sites have not been quantified beyond ensuring that they exceed the minimum threshold value established by the State Mining and Geology Board for each category of commodity. However, the reserves of those mines which are actively producing other construction aggregates were calculated for inclusion in the final estimate of total aggregate reserves for the region, to be compared with the total aggregate demand of the region for the next 50 years. It is important to note that the classification of deposits which contain active mine sites is not to be construed as a classification of the entire region for these commodities, but solely a classification of individual deposits where commercial extraction of a mineral resource occurs. Because no attempt was made to determine the regional significance of these individual deposits, they have not been sectorized as candidates for designation by the Board.

The San Luis Obispo-Santa Barbara P-C Region has ten deposits currently being mined for commodities other than PCC-grade aggregate which are classified as MRZ-2 as shown on Plates 1 - 41. These deposits are mined by ten different companies, but are not completely correlated to the deposits on a one-to-one basis. One company mines two different deposits and two companies mine within the same deposit. The commodities mined are aggregate base from recent alluvium, diatomite and decorative stone from Miocene marine sediments, asphaltic aggregate from recent stream channel alluvium, specialty sands from Tertiary sediments and coastal dunes, and riprap from Cretaceous sandstone.

Upper Cretaceous sandstone, exposed in a ridge about 3 miles south of Cambria on the west side of Highway 1, in San Luis Obispo County, is classified as MRZ-2 for riprap.

- Cambria Radar Station Quarry, operated by Negranti Construction Company, is located on the west side of Estrada Ridge. The property covers 57 acres at the north end of the ridge, all of which have been classified as MRZ-2 for riprap (Plate 3). Mining began at this site in about 1925. The material mined is a hard feldspathic graywacke and arkosic wacke of Upper Cretaceous age. The sandstone is highly fractured and is composed mostly of quartz (50-70 percent). The deposit is classified for riprap because the bulk of the produced material is sold for that use, and test data to substantiate PCC quality were lacking.

The sand dunes along the coast are mined at two locations within the P-C region for specialty sands. These two properties are classified as MRZ-2 for specialty sands.

- Oceano Sand Company operates a sand mine in the coastal dunes just south of Oceano in San Luis Obispo County (Plate 16). Specialty sand has been produced from this 30-acre property since before 1920. Recent production has been used in golf course sand traps.

- Gordon Sand Company mines specialty sand on a 27-acre parcel about 1 mile south of the mouth of the Santa Maria River in Santa Barbara County (Plate 20). The windblown dune sands are processed for use in sand blasting.

Aggregate subbase material is mined from recent alluvium along Alamo Creek in San Luis Obispo County. This property is classified as MRZ-2 for subbase.

- Alamo Rock and Sand Company mines sand and gravel along Alamo Creek, about 2 miles north of Highway 166, 8 miles northwest of Santa Maria (Plate 18). Alluvial material is skimmed from the creek bed and processed for use as subbase.

Decorative stone is mined from the siliceous shales of the Monterey Formation along Tepusquet Canyon in Santa Barbara County. The quarry is classified as MRZ-2 for decorative stone.

- Antolini and Sons quarries decorative stone at two locations in Santa Barbara County, the Santa Maria Quarry and the Colson Summit Quarry. The Colson Summit Quarry is outside of the P-C region. At the Santa Maria Quarry, about 25 miles east of Santa Maria, siliceous shale from the Miocene-age Monterey Formation is mined for use as building stone (Plate 24).

Diatomite is mined from Miocene rocks south of Lompoc in Santa Barbara County. The diatomite mines here are the largest in the world. There are four separate properties that are classified as MRZ-2 for diatomite.

- Manville Corporation has two properties south of Lompoc which have nearly 3,000 acres underlain by reserves of diatomite (Plates 29, 32, and 33). The diatomite operation here is the largest in the world. The diatomite from this quarry is used in the filtration of beer, wine, cooking oils, and many other liquids.

- Grefco, Inc. operates the second largest diatomite quarry in the Lompoc area. From the two properties controlled by Grefco, Inc., diatomite is mined for use in filtration and as paint extender (Plates 32 and 33).

Asphaltic aggregate and other construction aggregate materials are mined from the active stream channel of the Santa Ynez River near Buellton in Santa Barbara County. Because of the information that is available concerning the geology of the alluvial deposits along the Santa Ynez River, a large area of the river channel outside of the property boundaries of the two active mines was also classified as MRZ-2 for asphaltic aggregate. Geologic mapping by the U.S. Geological Survey (Wilson, 1959) and drill logs were used to classify the deposit.

- Buellflat Rock Company mines alluvium from the Santa Ynez River next to the city of Solvang (Plate 34). A wide range of aggregate products including asphaltic aggregate and chipseal (surface coating for streets) are sold here. Because both the sand and gravel fractions of the deposit contain large amounts of Monterey shale fragments, the material cannot meet the quality standards for Portland cement concrete aggregate.

- Granite Construction Company operates a sand and gravel mine - the Gardner Pit - along the Santa Ynez River between Buellton and Solvang (Plate 34). The plant produces road building materials that are used over a large part of Santa Barbara County. As in all of the alluvial deposits along the Santa Ynez River, there are too many shale fragments to permit the material to be used as Portland cement concrete aggregate.

Sand is mined from a Tertiary marine formation near Santa Barbara. The mine property and an adjacent part of the same formation have been classified as MRZ-2 for specialty sand.

- Santa Barbara Sand and Topsoil Company mines sand from the Vaqueros Formation in Ellsworth Canyon, about 5 miles west of Goleta in Santa Barbara County (Plate 37). The material is sorted for sand and sold for use in house pads and foundations, trench filling, and landscaping. Although this is a low-grade deposit, the contribution it makes to the construction aggregate needs of the urban area in and around the city of Santa Barbara is important. All other construction aggregate must be transported from either the Buellton area or from Ventura County.

Other Active Mines Not Classified as MRZ-2

Besides the ten deposits that have been classified as MRZ-2 for commodities other than PCC-grade aggregate, there are several active or intermittently active deposits that have less than the threshold value of resources available. The majority of these deposits are mined for road base materials (road base, subbase, and class III aggregate base) and are located in San Luis Obispo County. The San Luis Obispo County Engineering Department prefers to have a source for class III aggregate base available along each county-maintained dirt road. This is to avoid the haulage of road material over paved highways. These quarries are generally located in the Franciscan Formation and are termed "red rock" quarries because of the reddish color of the material. The Franciscan Formation is a disorderly assemblage of various rocks that have undergone unsystematic disturbance. This heterogeneous mixture of rock material is called a "melange." The desired material for road base is generally found as small pods of hard rock within this melange. Although, as has been mentioned, none of these deposits have threshold amounts of material, as a group they constitute an important source of construction aggregate for the region. Table 8 is a listing of these and other small mines. Their locations are plotted on Plate 55.

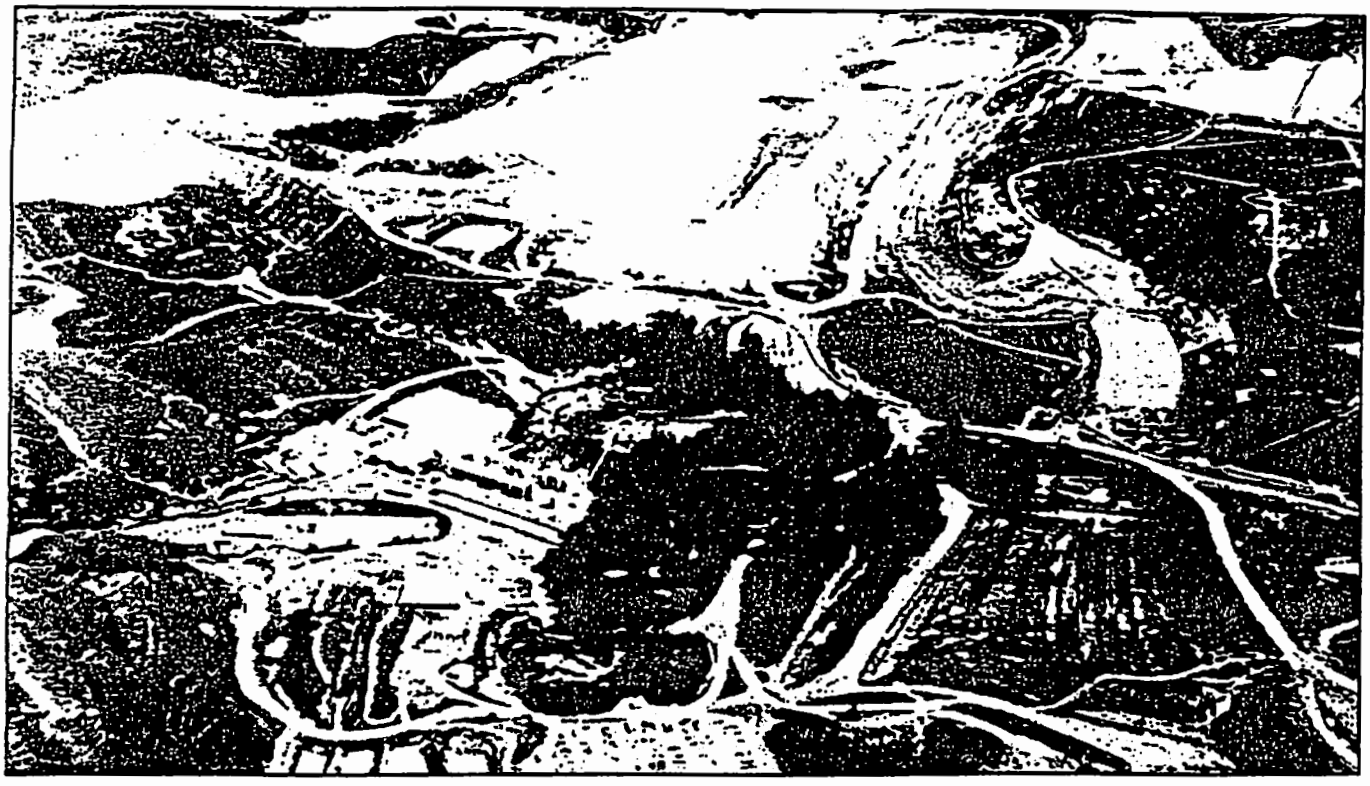
Table 8. Active mines with less than threshold value of commodities other than PCC-grade aggregate.

MINE NAME (ALTERNATE NAME*)	COUNTY AND (7.5' QUADRANGLE)	PRIMARY COMMODITY	GEOLOGIC FORMATION
Acin Quarry	Santa Barbara (Lompoc)	decorative stone	Monterey Formation
Alberti Ranch Quarry	San Luis Obispo (San Luis Obispo)	base aggregate	Franciscan Formation
Beecham Pit (Red Rock Pit)	San Luis Obispo (Morro Bay South)	Class III aggregate	Franciscan Formation
Biagginni Pit	San Luis Obispo (Cayucos)	Class III aggregate	Franciscan Formation
Brughelli Pit	San Luis Obispo (San Luis Obispo)	Class III aggregate	Franciscan Formation
Domenghini Pit	San Luis Obispo (Morro Bay North)	Class III aggregate	Franciscan Formation
Froom Ranch Pit	San Luis Obispo (San Luis Obispo)	Class III aggregate	Franciscan Formation
Guerra Quarry	San Luis Obispo (Morro Bay North)	subbase	Franciscan Formation
Hartzell Pit (Cienega Creek Quarry)	San Luis Obispo (York Mountain)	Class III aggregate	Franciscan Formation
Hawley Rock Quarry (El Jaro Quarry)	Santa Barbara (Santa Rosa Hills)	riprap	Monterey Formation
Hedges Pit (Ormond Road Pit)	San Luis Obispo (Arroyo Grande NE)	fill sand	Pismo Formation
Homeplace Pit	San Luis Obispo (San Luis Obispo)	Class III aggregate	Franciscan Formation
Huasna River Pit	San Luis Obispo (Huasna Peak)	Class III aggregate	Recent alluvium
Land Mine (Land Red Rock Pit)	San Luis Obispo (Cypress Mountain)	road base	Franciscan Formation
Las Cruces Quarry	Santa Barbara (Santa Rosa Hills)	decorative stone	Monterey Formation
Live Oak Shale Quarry	Santa Barbara (Solvang)	subbase	Sespe Formation
Miguelito Canyon Quarry	Santa Barbara (Lompoc Hills)	road base	Monterey Formation
Millhollin Pit	San Luis Obispo (Atascadero)	road base	Atascadero Formation
Mountain Springs Quarry	San Luis Obispo (Paso Robles)	road base	Monterey Formation
Nicholson Red Rock Pit	San Luis Obispo (Morro Bay North)	Class III aggregate	Franciscan Formation
North River Road Pit	San Luis Obispo (Paso Robles)	Class II aggregate	Quaternary alluvium

Table 8. (continued)

MINE NAME (ALTERNATE NAME*)	COUNTY AND (7.5' QUADRANGLE)	PRIMARY COMMODITY	GEOLOGIC FORMATION
Ole Vlborg Salinas River Pit	San Luis Obispo (Paso Robles)	fill sand	Recent alluvium
Parker Red Rock Pit	San Luis Obispo (San Luis Obispo)	Class III aggregate	Franciscan Formation
Patchett Pit	San Luis Obispo (Arroyo Grande NE)	Class III aggregate	Pismo Formation
Sanford Quarry	Santa Barbara (Tranquillion Mtn.)	decorative stone	Monterey Formation
Serrano Pit	San Luis Obispo (Morro Bay South)	Class III aggregate	Franciscan Formation
Sheehy Pit (Dana Ranch Pit)	San Luis Obispo (Nipomo)	Class III aggregate	Franciscan Formation
Signorelll Quarry	Santa Barbara (Tranquillion Mtn.)	decorative stone	Monterey Formation
Solvang Sand Pit	Santa Barbara (Zaca Creek)	fill sand	Careaga Formation
Stornetta Plt	San Luis Obispo (Arroyo Grande NE)	Class III aggregate	Franciscan Formation
12th Street Pit	San Luis Obispo (Paso Robles)	fill sand	Recent alluvium
V.J. Rock Transport Sand Pit	Santa Barbara (Lompoc)	fill sand	Recent alluvium
Valley Trucking Sand Pit (Lompoc Sand and Gravel Pit)	Santa Barbara (Lompoc)	fill sand	Recent alluvium
W. W. Warren Pit	San Luis Obispo (Cayucos)	Class II aggregate	Franciscan Formation
Whale Rock Pit	San Luis Obispo (San Luis Obispo)	Class III aggregate	Franciscan Formation

* Mine name in list of Mining Operations Subject to SMARA (MOSS) if different. The MOSS list is a Division of Mines and Geology internal information file.



Aerial view of Manville Corporation diatomite plant at Lompoc.

Coast Rock Products, Inc. aggregate plant on the Sisquoc River.

ESTIMATED 50-YEAR CONSUMPTION OF AGGREGATE

Basis of 50-Year Forecast

The State Mining and Geology Board, as specified in its "Guidelines for Classification and Designation of Mineral Land" (California State Mining and Geology Board, 1983, Part II) requires that mineral land classification reports for regions containing construction materials classified as MRZ-2 include "An estimate of the total quantity of each such construction material that will be needed to supply the requirements of both the county and the marketing region in which it occurs for the next 50 years. The marketing region is defined as the area within which such material is usually mined and marketed. The amount of each construction material mineral resource needed for the next 50 years shall be projected using past consumption rates adjusted for anticipated changes in market conditions and mining technology." In the guidelines the Board also specifies that these estimates be reviewed periodically (every 10 years or fewer).

A 50-year forecast of PCC aggregate needs in the San Luis Obispo-Santa Barbara P-C Region was made on the basis of reported aggregate production during the years 1960-1987. The P-C region boundary is defined to ensure that no more than one percent of the PCC aggregate produced in the San Luis Obispo-Santa Barbara area is delivered outside of the P-C region, and that imports of PCC-grade aggregate from outside the P-C region or the neighboring Western Ventura County P-C Region, are less than 5 percent. Mines in the Western Ventura County P-C Region supply about 10 percent of the aggregate demand in the San Luis Obispo-Santa Barbara P-C Region.

Correlations between Aggregate Production and Consumption

Past studies of marketing regions in California have shown that there is a strong correlation between the amount of aggregate produced and the population in a given aggregate production-consumption region (Anderson and others, 1979.) On this basis, aggregate production and population figures in the San Luis Obispo-Santa Barbara P-C Region were correlated for the years 1960-1987 (Table 9). Correlations between the annual aggregate production records and the population statistics were used to compute historic annual per capita consumption rates of aggregate in the study area. This annual per capita consumption figure is for all aggregate, not just PCC aggregate. The historical aggregate production data for the study area were obtained from mining records of the U.S. Department of the Interior, Bureau of Mines and the aggregate companies. The Bureau of Mines' records are compiled from responses to voluntary questionnaires that are sent annually or semi-annually to all known mining operators. Each producer is requested to divulge the production from each of his producing properties for the preceding year. It is important to note that the degree of accuracy of these statistics depends entirely on the producer's response. Although compliance is usually good, the DMG staff did not verify production data in the Bureau of Mines' files. Historical population data for the San Luis Obispo-Santa Barbara P-C Region were received from the California Department of Finance and the U.S. Department of Commerce (1970 and 1980).

The average per capita consumption rate in the San Luis Obispo-Santa Barbara P-C Region has been 6.0 tons of aggregate per year over the period 1960-1987 (Table 9). Due to the erratic variations in aggregate production from year to year, a three-year moving average of the annual aggregate production was used in conjunction with population statistics to compute the per capita consumption rates for the P-C region (Figures 5, 6, and 7). The moderate consumption rates in the San Luis Obispo-Santa Barbara area appear to be characteristic of aggregate marketing regions in which the overall population density is relatively low and the rate of urban development is moderate. For example, the Simi Valley P-C Region (Ventura County) and the Western San Diego County P-C Region were both found to have consumption rates of 5.5 tons per person per year.

A moderate consumption rate will most likely continue in the foreseeable future. As the population density of the region is so low, the point of urban maturity, wherein all available open land is urbanized, probably will not be reached in the next 50 years. If this point of urban maturity were reached, then a decrease in the annual per capita consumption rate would be expected.

Projected Population and Per Capita Consumption through the Year 2038

A simple analysis of the historical aggregate production and past population statistics and population projections for the future was made to forecast the rate of aggregate consumption within the San Luis Obispo-Santa Barbara P-C Region through the year 2038. The total aggregate needs of the study area through the year 2038 were calculated on the basis of two factors: (1) the past average

Table 9. Population, aggregate consumption (tons), and per capita consumption (tons) in the San Luis Obispo-Santa Barbara P-C Region during the years 1960-1987. (All figures are rounded to the nearest 1,000).

YEAR	POPULATION	AGGREGATE CONSUMPTION (tons)	3-YEAR AVERAGE OF CONSUMPTION (tons)	ANNUAL PER CAPITA CONSUMPTION (tons)
1960	237,000	1,546,000		
1961	248,000	1,838,000	1,728,000	7.0
1962	260,000	1,800,000	1,682,000	6.5
1963	272,000	1,407,000	1,821,000	6.7
1964	284,000	2,256,000	1,788,000	6.3
1965	295,000	1,700,000	2,032,000	6.9
1966	307,000	2,139,000	1,812,000	5.9
1967	319,000	1,597,000	1,884,000	5.9
1968	331,000	1,917,000	1,649,000	5.0
1969	342,000	1,434,000	1,554,000	4.5
1970	354,000	1,310,000	1,571,000	4.4
1971	361,000	1,968,000	1,753,000	4.9
1972	367,000	1,981,000	2,100,000	5.7
1973	374,000	2,339,000	2,155,000	5.8
1974	385,000	2,146,000	2,298,000	6.0
1975	392,000	2,409,000	2,422,000	6.2
1976	401,000	2,711,000	2,550,000	6.4
1977	409,000	2,531,000	2,581,000	6.3
1978	416,000	2,501,000	2,337,000	5.6
1979	424,000	1,978,000	2,116,000	5.0
1980	434,000	1,869,000	2,147,000	4.9
1981	441,000	2,593,000	2,329,000	5.3
1982	451,000	2,524,000	2,658,000	5.9
1983	463,000	2,858,000	2,985,000	6.4
1984	476,000	3,574,000	3,356,000	7.1
1985	491,000	3,636,000	3,509,000	7.1
1986	507,000	3,318,000	3,434,000	6.8
1987	522,000	3,349,000		

Average annual per capita consumption for 1960-1987 is 6.0 tons.

Table 10. Projected aggregate consumption through the year 2038 for the San Luis Obispo-Santa Barbara PCC Region . Five-year per capita consumption = 30.0 tons/person. One-year per capita consumption = 6.0 tons/ person.

YEARS	PROJECTED AVERAGE YEARLY POPULATION*	PROJECTED AGGREGATE CONSUMPTION ALL AGGREGATE (million tons)	PROJECTED AGGREGATE CONSUMPTION PCC AGGREGATE (million tons)**
1989-1993	532,352	16.0	5.9
1994-1998	572,724	17.2	6.4
1999-2003	608,734	18.3	6.8
2004-2008	640,334	19.2	7.1
2009-2013	671,699	20.2	7.5
2014-2018	703,063	21.1	7.8
2019-2023	734,427	22.0	8.2
2024-2028	765,792	23.0	8.5
2029-2033	797,155	23.9	8.8
2034-2038	828,520	24.9	9.2
TOTALS		205.8	76.2

* Population projections for the years 1989-2020 are from the California Department of Finance (1986). Population data for the years 2021-2038 are linear projections from the Department of Finance data.

** This figure is based on the fact that 37 percent of the aggregate consumed from 1960 to 1987 was used in PCC (Table 11).

annual per capita consumption rate of 6.0 tons (the average annual per capita consumption rate for the years 1960-1987) and (2) the projected population of the region through the year 2038 (Table 10). The total PCC aggregate demand through the year 2038 is based on historic PCC aggregate consumption. The average percentage of total aggregate consumption used as PCC aggregate was calculated using data from the years 1960-1987. For the San Luis Obispo-Santa Barbara P-C Region, the average historic percentage of PCC aggregate use has been 37 percent of the total aggregate consumption (Table 11).

Population projections for the years 1988 to 2020 (Figure 8) were obtained from the California Department of Finance (1986). To project the population of the area for the years 2021-2038, the Department of Finance projections to the year 2020 were extended in a straight line to the year 2038. The results of these projections, combined with the calculated per capita consumption rate, show that an estimated 206 million tons of aggregate will be needed to satisfy the future demand through the year 2038 in the San Luis Obispo-Santa Barbara P-C Region. Of this total, 37 percent, or 76 million tons must be of PCC grade.

Factors Affecting Per Capita Consumption Rates

The wide variations from year to year in the per capita consumption rate (Figure 7) probably reflect to a large degree, changes in urban growth rates and intermittent large construction projects (for example: freeways, dams, and canals). In part, these variations also result from incompleteness and inaccuracies in the production records supplied by the Bureau of Mines. Certainly the economic climate is a powerful variable that influences the annual per capita consumption rates for aggregate. Very high interest rates, for example, such as existed in California in 1979 and 1980, tended to lower the amount of new construction and consequently lower the demand for aggregate. High consumption of aggregate occurred in the region in the mid-1960's due to construction on Highway 101, and in the mid-1980's as the construction industry rebounded after an economic recession in the early 1980's.

At some point in the future the average annual per capita consumption rate of 6.0 tons for the San Luis

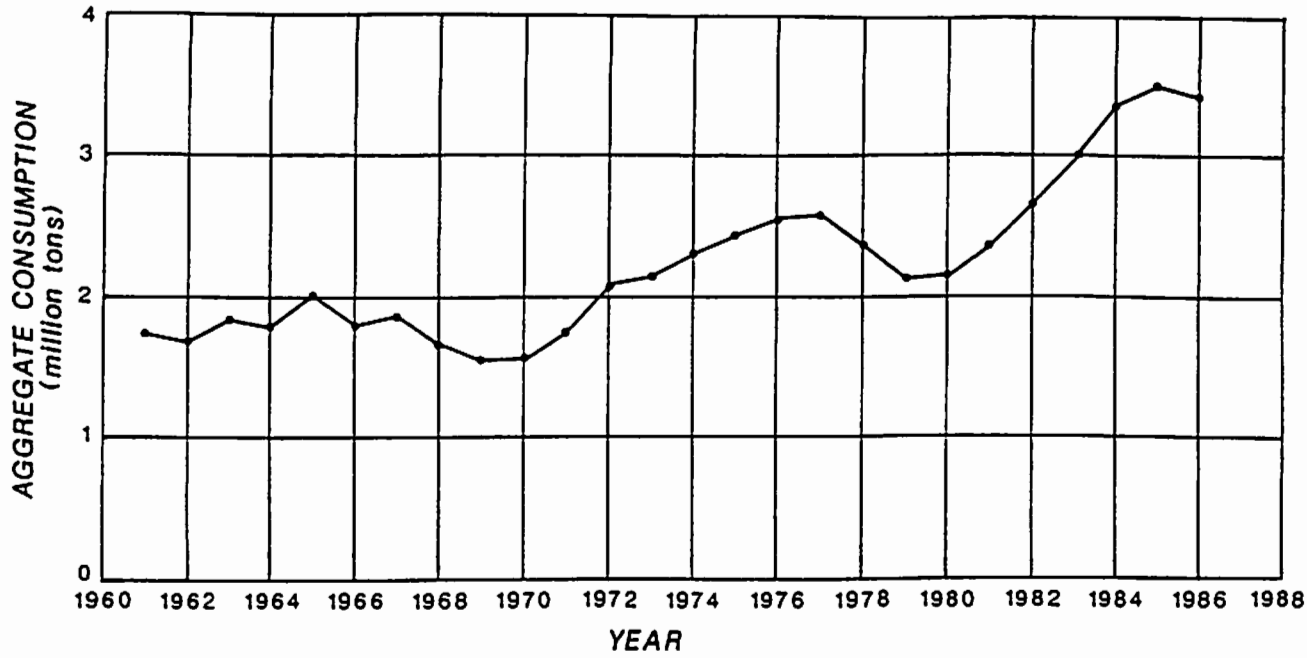


Figure 5. Aggregate consumption (3-year averages) in the San Luis Obispo-Santa Barbara P-C Region, 1961-1986.

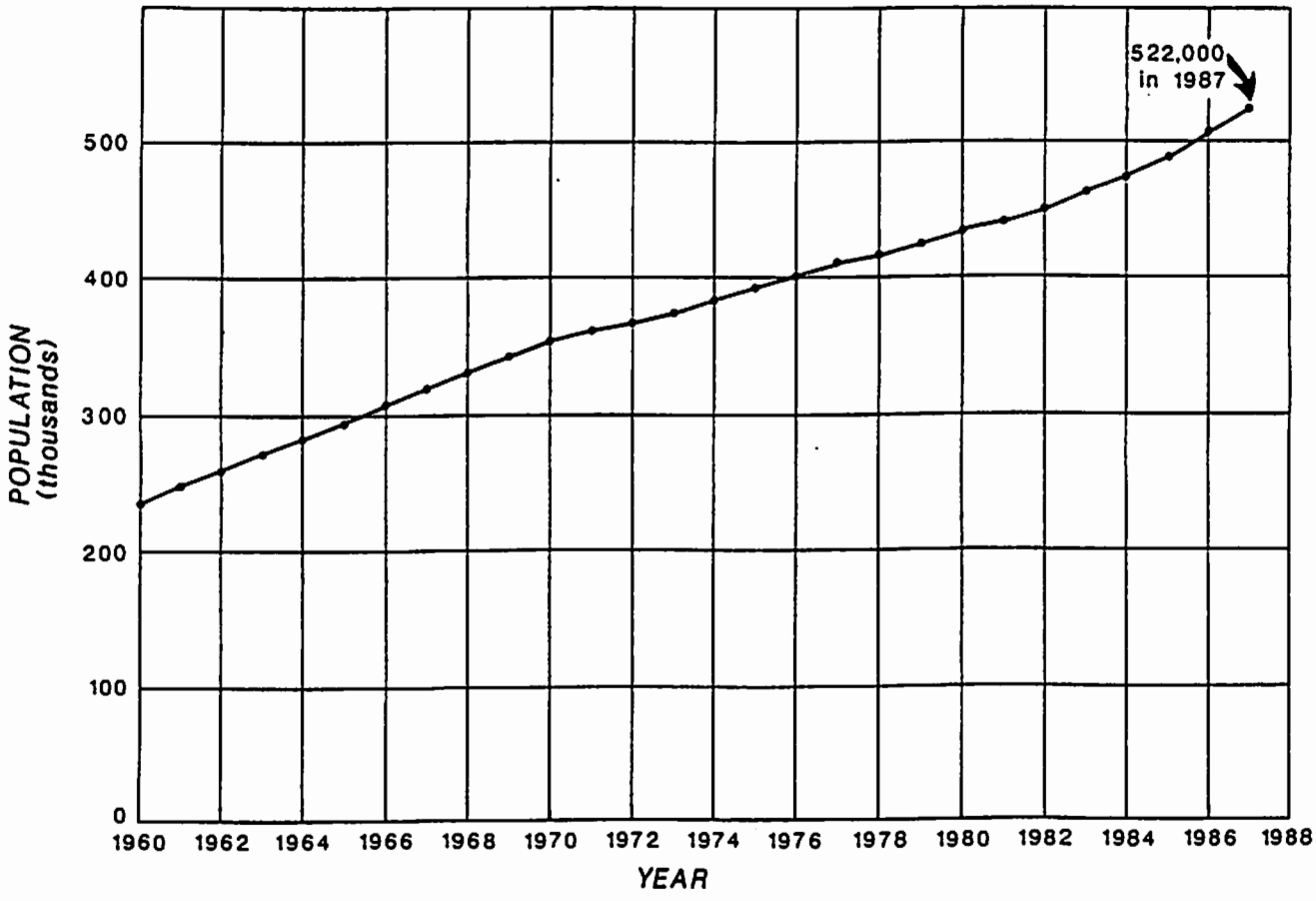


Figure 6. Population in the San Luis Obispo-Santa Barbara P-C Region, 1960-1987.

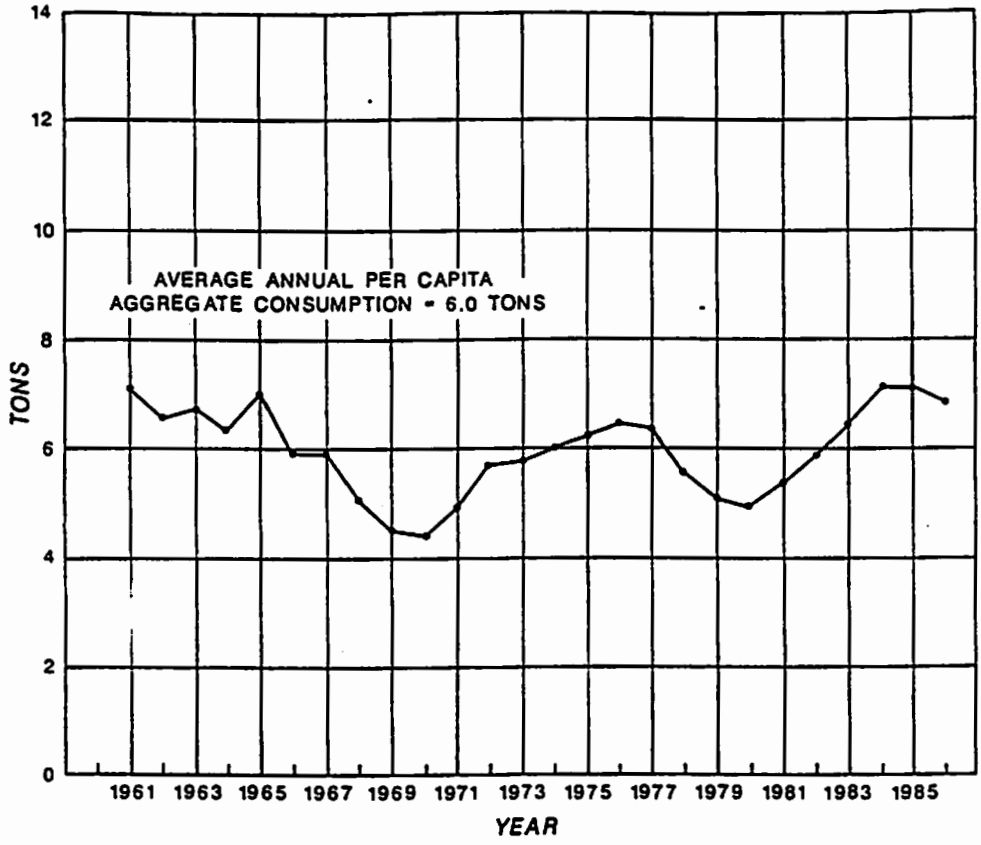


Figure 7. Annual per capita consumption of aggregate in the San Luis Obispo-Santa Barbara P-C Region, 1961-1986.

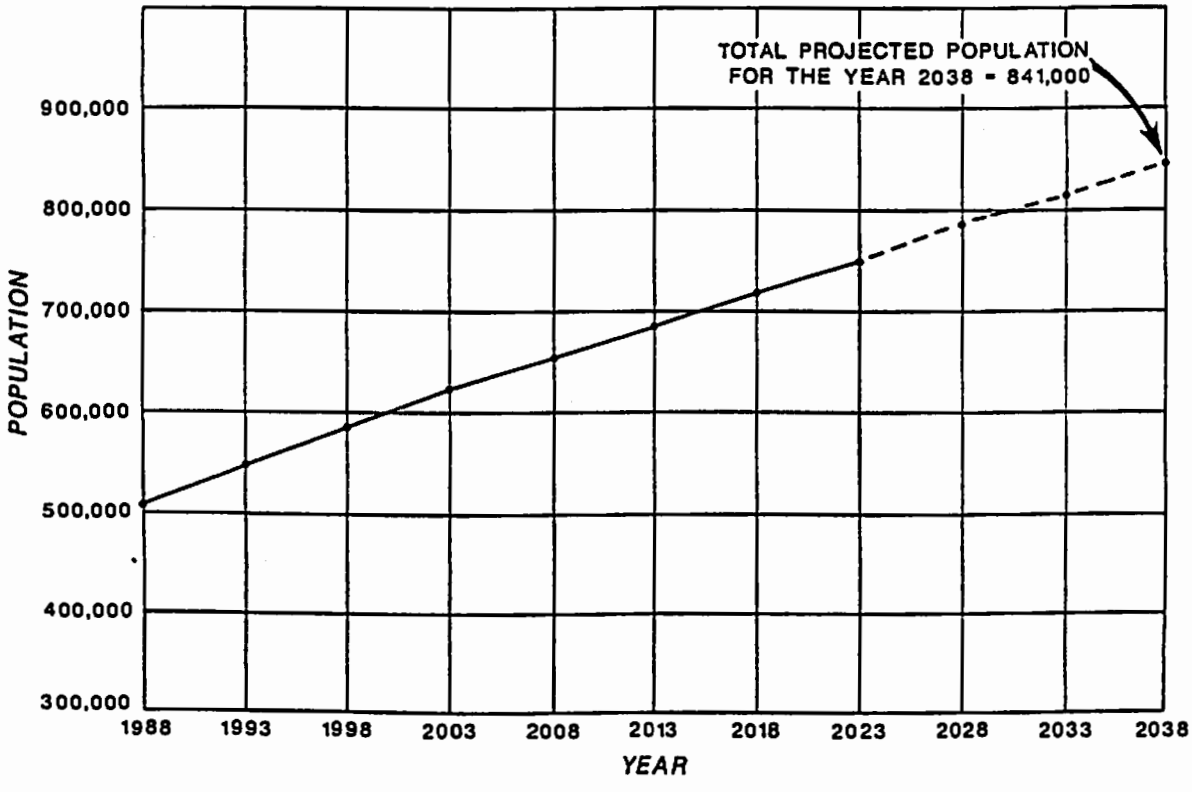


Figure 8. Projected population of the San Luis Obispo-Santa Barbara P-C Region for the years, 1988-2038.

Table 11. Percentage of total aggregate consumption used for Portland cement concrete (PCC) aggregate in the San Luis Obispo-Santa Barbara P-C Region during the years 1960-1987. (All figures rounded to nearest 1,000.)

YEAR	TOTAL AGGREGATE CONSUMED (tons)	PCC AGGREGATE CONSUMED (tons)	PERCENT OF TOTAL AGGREGATE CONSUMPTION USED AS PCC AGGREGATE
1960	1,546,000	773,000	50
1961	1,838,000	859,000	47
1962	1,800,000	695,000	39
1963	1,407,000	587,000	42
1964	2,256,000	914,000	41
1965	1,700,000	887,000	52
1966	2,139,000	576,000	27
1967	1,597,000	563,000	35
1968	1,917,000	587,000	31
1969	1,434,000	479,000	33
1970	1,310,000	521,000	40
1971	1,968,000	863,000	44
1972	1,981,000	826,000	42
1973	2,339,000	774,000	33
1974	2,146,000	796,000	37
1975	2,409,000	712,000	30
1976	2,711,000	846,000	31
1977	2,531,000	849,000	34
1978	2,501,000	880,000	35
1979	1,978,000	558,000	28
1980	1,869,000	522,000	28
1981	2,593,000	799,000	31
1982	2,524,000	1,042,000	41
1983	2,858,000	1,043,000	36
1984	3,574,000	1,362,000	38
1985	3,636,000	1,435,000	39
1986	3,318,000	1,346,000	41
1987	3,349,000	1,218,000	36
TOTALS	63,229,000	23,285,000	

Average percentage of total aggregate consumption used as PCC aggregate = 37 percent.

Table 12. Summary of aggregate resources and 50-year demand for the San Luis Obispo-Santa Barbara P-C Region.

PCC-grade aggregate resources (includes PCC-grade aggregate reserves)	11,175,000,000 tons
PCC-grade aggregate reserves	107,000,000 tons
All aggregate reserves	132,000,000 tons
50-year demand, PCC aggregate	76,000,000 tons
50-year demand, all aggregate	206,000,000 tons

Obispo-Santa Barbara P-C Region will probably decrease with the onset of urban maturity and stabilize at a lower rate. This probably will not occur during the next 50 years due to the large areas of developable land available within the region. Also, major unforeseen events such as disaster reconstruction in the wake of an earthquake or a major economic recession would cause the per capita consumption rate of aggregate to change radically.

Comparison of the 50-Year Aggregate Demand with Current Reserves

The total PCC-grade aggregate reserves for the San Luis Obispo-Santa Barbara P-C Region were calculated to be 107 million tons. And the total aggregate reserves, including reserves of construction aggregates other than PCC grade, were estimated to be 132 million tons (these figures do not reflect reserve depletion since January 1, 1988). At the average rate of historic aggregate consumption in the region (6.0 tons per person per year), the total reserves are theoretically sufficient to last 34 years, until 2023.

According to the U.S. Bureau of Mines aggregate production statistics, confirmed by aggregate operators in the P-C region, for the years 1960 to 1987, 37 percent of the total aggregate consumed in the region was used for PCC (Table 10). This equates to 76 million tons of PCC aggregate that will be needed within the next 50 years. If the 107 million tons of PCC-grade aggregate reserves were used exclusively for PCC aggregate, the supply would theoretically last more than 50 years. In reality, much of the PCC-grade aggregate reserves will be used for other products, and a depletion date of 2023 is more likely. Table 12 is a summary of present aggregate resources and future aggregate demands for the San Luis Obispo-Santa Barbara P-C Region.

ALTERNATIVE SOURCES OF AGGREGATE

Potential sources of Portland cement concrete aggregate, in addition to the deposits classified as MRZ-2, exist within and near the San Luis Obispo-Santa Barbara P-C Region. These potential alternative sources include areas within the region that are classified as MRZ-3 and production areas in adjacent regions. These alternative sources are discussed in the following paragraphs.

Potential Sources of Aggregate within the San Luis Obispo-Santa Barbara P-C Region

Other than the large areas classified as MRZ-2 for Portland cement concrete (especially the La Panza granitics and the alluvium of the Santa Maria River), there are few promising sources for future PCC-grade aggregate in the region. Potential sources of Portland cement concrete aggregate of some note, that have been classified as MRZ-3, include Quaternary river terrace deposits, recent stream channel deposits, Mesozoic granitic rocks, and Mesozoic metamorphic rocks.

The older river terrace deposits along the Salinas River have been a source of concrete aggregate in the past, but all of the material may not be able to meet modern test standards for Portland cement concrete aggregate quality and waste percentages may be excessive. These terrace deposits are primarily in the area between the cities of Atascadero and Paso Robles, and north of Paso Robles.

The eastern parts of the La Panza granitics may contain unweathered material that is economically minable as crushed stone. The thickness of the weathered surface layer is the critical factor. Although the La Panza granitics are mined for aggregate at two locations in the western part which has been classified as MRZ-2, the overburden of weathered rock there is about 50 feet thick. In the eastern area of the granitics the topography is gentler, allowing for less erosion of weathered surface material; thus the PCC-grade stone may be overlain by a thicker layer of unsuitable material. Extensive geologic evaluation of site-specific areas would be necessary in the La Panza granitics.

The alluvium in the channel of the Cuyama River may be suitable for PCC aggregate. Material carried by the Cuyama River is mixed with sand and gravel from the Sisquoc River at the confluence of the two rivers near Fulger Point. The mixed material from these two rivers is mined for PCC aggregate by Coast Rock Products, Inc. It is possible, then, that material from the Cuyama drainage may be suitable for PCC aggregate. There are no data on the thickness of the alluvium in the bed of the Cuyama River; although it looks, from field observation, to be thin in several areas.

Although no aggregate of PCC quality has been mined from the Franciscan Formation in the region, there may be bodies of hard graywacke or metavolcanics within the

formation that would be suitable. The Franciscan Formation within the P-C region has never been a source for PCC aggregate.

Potential Sources of PCC-Grade Aggregate outside of the P-C Region

PCC-grade aggregate is being imported for use in the San Luis Obispo-Santa Barbara P-C Region from the lower Santa Clara River production area in the adjacent Western Ventura County P-C Region. Part III of Special Report 145 (Anderson and others, 1981) reported that the Western Ventura County P-C Region had a calculated 13 years of aggregate reserves as of the publication of that report. It is likely then that the reserves in the lower Santa Clara River will not be a source of PCC aggregate over a long period of time. And, because of the shortage of aggregate reserves in the Western Ventura County region, future decisions by lead agencies in that region may not take into account the needs of the Santa Barbara area.

It is possible that the Simi P-C Region could supply aggregate to the Santa Barbara area should the Western Ventura County region become depleted or unable to support exports to the San Luis Obispo-Santa Barbara region. Although the producers in the Simi region are much farther from Santa Barbara than the producers in the lower Santa Clara River, they are closer to Santa Barbara than the producers in the Sisquoc River production area.

Small amounts of PCC aggregate are being imported to the Paso Robles area, in the northern part of the San Luis Obispo-Santa Barbara P-C Region, from near the town of Coalinga in Fresno County. Producers in this part of Fresno County may be able to continue supplying northern areas of the P-C region with limited amounts of aggregate as the distance of this area from Paso Robles is about the same as from the Sisquoc River production area. Although there are large reserves of crushed aggregate closer to urban areas in the northern part of the P-C region (Union Asphalt, Inc. Rocky Canyon Quarry and Southern Pacific Milling Company Santa Margarita Quarry) for contractors who prefer to use rounded alluvial gravel in making Portland cement concrete, Navajo Creek, Sisquoc River, and Coalinga are the closest production areas.

Streambed deposits along the upper Nacimiento River in Monterey County, about 20 miles north of the San Luis Obispo-Santa Barbara P-C Region, have been reported to contain aggregate material possibly of PCC grade (Goldman, 1964). Data are lacking on the thickness of the deposit to evaluate the quantity available, and tests of the reactivity of the material have not been recorded to determine quality.

CONCLUSIONS

Within the San Luis Obispo-Santa Barbara P-C Region, five resource sectors were identified as containing significant resources of PCC-grade aggregate. These areas contain an estimated total of 11,175 million tons of PCC-grade aggregate resources of which 6,119 million tons are crushed stone resources and 5,056 million tons are sand and gravel resources. There are 107 million tons of PCC-grade aggregate reserves, including both sand and gravel and crushed stone.

Based upon available production data and population projections, the San Luis Obispo-Santa Barbara P-C Region will need 206 million tons of aggregate during the next 50 years. Of this projected demand, approximately 37 percent (76 million tons) must be suitable for Portland cement concrete. There are 107 million tons of PCC-grade aggregate reserves and another 25 million tons of lower-grade aggregate reserves calculated to exist within the P-C region. This total of 132 million tons of aggregate is approximately 64 percent of the projected aggregate demand over the next 50 years. Unless new resources are permitted for mining, or alternative resources are utilized, existing reserves will be depleted by the year 2023. If a major earthquake or similar unforeseen catastrophic event strikes the P-C region and necessitates reconstruction, existing reserves will be depleted sooner.

Ten deposits currently being mined within the region for commodities other than PCC aggregate were found to meet the criteria for classification as MRZ-2. These deposits produce aggregate base, diatomite, decorative stone, asphaltic aggregate, specialty sand, and riprap.

ACKNOWLEDGMENTS

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APPENDIX

Interim Criteria for Sectorization of MRZ-2 Areas for Aggregate

The purpose of sectorizing MRZ-2 areas is to provide a semi-quantified estimate of construction aggregate resources which are likely to be available to satisfy society's needs during the next 50 years. This estimate, when compared to DMG-projected needs for the next half-century, provides the context for communities to plan for future availability in their land-use policies. The determination of sectors is intended for the use of the State Mining and Geology Board (Board) in identifying areas which are candidates for designation under SMARA. The development of sectors provides a perception of future mineral resource availability in the face of future needs and also portrays where these available minerals are generally located. This information is distributed by the Board to all affected lead agencies to provide them with the data necessary to plan for future resource availability in their land-use policies.

All areas within MRZ-2 classifications are sectorized if they have current land uses which are similar to those in s which have undergone mineral extraction in the past. Areas within MRZ-2 classifications which have generally not been available for surface mining in the past for specified social or economic reasons are not sectorized. Since such areas are unlikely to be used for surface mining during the foreseeable future, their inclusion in estimates of future resource availability would be misleading.

The estimation of future mineral resource availability in sectors is not a precise analysis, but rather the best general estimate which can be made with the data presently available. Areas within and without sectors can be used for mining or other land uses at the discretion of the local governments which are charged with responsibility for making land-use decisions. Establishment of sectors in no way infringes on this authority. Rather, it provides a perception of future mineral resource availabilities in the face of future needs and also portrays where these minerals are generally located.

The following criteria were used by DMG in identifying mineral resource areas which are available for future use. These criteria, in conjunction with the geologic and geometric characteristics of specific mineral deposits were used in sectorizing MRZ-2 areas. Use of these criteria assures that sectors contain geologically homogeneous mineral deposits which, based upon current land use, will be available for future use.

The following specific land uses are considered to be generally incompatible with mining and have been excluded from sectored lands. Mineral resource areas containing land uses not specifically listed will be considered for sectorization. The criteria are to be applied only to lands classified as MRZ-2.

There are two general categories of exclusion: I) Economic Exclusion, and II) Social Exclusion.

I) Economic Exclusion
Specific excluded land uses are:

1) Residential areas
2) Commercial areas with land improvements (buildings)
3) Industrial areas (buildings and adjacent needed storage and parking facilities), and
4) Major public or private engineering projects, including:
   a) canals
   b) freeways
   c) bridges
   d) airports and associated developments such as parking lots
   e) dams
   f) railroads
   g) major pipelines
   h) major power transmission lines

II) Social Exclusion
Specific excluded land uses are:

1) Cemeteries
2) Geologic Scientific Zones
3) Public parks, developed historical sites and structures, and public recreation areas of all types
4) Public or private schools, institutions, hospitals, and prisons, including adjacent grounds and related structures, and
5) Military bases and reservations

MINERAL LAND CLASSIFICATION: PORTLAND CEMENT CONCRETE AGGREGATE AND ACTIVE MINES OF ALL OTHER MINERAL COMMODITIES IN THE SAN LUIS OBISPO-SANTA BARBARA PRODUCTION-CONSUMPTION REGION - 1989

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APPENDIX B

California Surface Mining and Reclamation Act

State Mining and Geology Board
Reclamation Regulations

Santa Maria and Sisquoc Rivers Specific Plan

CALIFORNIA DEPARTMENT OF CONSERVATION
OFFICE OF MINE RECLAMATION

JANUARY 1998

SURFACE MINING AND RECLAMATION ACT AND ASSOCIATED REGULATIONS

CONTENTS:

THE RESOURCES AGENCY
DOUGLAS P. WHEELER
SECRETARY FOR RESOURCES

STATE OF CALIFORNIA
PETE WILSON
GOVERNOR

DEPARTMENT OF CONSERVATION
LAWRENCE J. GOLDZBAND
DIRECTOR

SURFACE MINING AND RECLAMATION ACT OF 1975

As amendad by:

Sanate Bill 1300, Najadly - 1980 Statutes
Assembly Bill 110, Aralas - 1984 Statutes
Sanata Bill 593, Royce - 1985 Statutas
Sanate Bill 1261, Saymour - 1986 Statutes
Assembly Bill 747, Sher - 1987 Statutas
Assembly Bill 3551, Sher - 1990 Statutes
Assambly Bill 3903, Shar - 1990 Statutes
Assembly Bill 1506, Sher - 1991 Statutas
Sanate Bill 1569, Rogars - 1992 Statutas
Assembly Bill 3098, Sher - 1992 Statutes
Assambly Bill 723, Sher - 1993 Statutes
Assembly Bill 904, Sher - 1993 Statutes
Assambly Bill 867, Sher - 1994 Statutes
Sanate Bill 273, Leslie - 1995 Statutes
Sanate Bill 614, Craven et al - 1995 Statutas
Assambly Bill 1373, Olberg - 1996 Statutes, and
Sanata Bill 1549, Montaith - 1996 Statutes

Articla 1. Genaral Provisions

§ 2710. This chaptar shall be known and may ba cited as tha Surfaca Mining and Reclamation Act of 1975.

§ 2711. (a) The Lagislature hereby finds and declaras that tha extraction of minarals is essential to the continued economic wall-being of the state and to tha naeds of tha sociaty, and that tha reclamation of minad lands is nacessary to prevant or minimiza advarse effacts on the environmant and to protact tha public haalth and safety.

(b) Tha Legislatura furthar finds that the raclamation of mined lands as providad in this chapter will parmit the continuad mining of minerals and will provida for the protection and subsaquant baneficial usa of tha mined and reclaimed land.

(c) Tha Legislature furthar finds that surface mining takes place in diversa areas whara the gaologic, topographic, climatic, biological, and social conditions are signficantly diffarant and that reclamation oparations and tha specifications therefora may vary accordingly.

§ 2712. It is tha intent of the Legislature to create and maintain an effective and comprahansiva surfaca mining and reclamation policy with ragulation of surface mining operations so as to assure that:

(a) Adversa anvironmantal effacts are praventad or minimized and that minad lands are reclaimed to a usable condition which is readily adaptabla for alternative land uses.

(b) Tha production and conservation of minarals are encouraged, whila giving considaration to valuas ralating to recreation, watershed, wildlife, range and forage, and aesthatic anjoyment.

(c) Rasidual hazards to tha public health and safaty are eliminated.

§ 2713. It is not the intent of the Legislature by tha enactmant of this chapter to take private proparty for public use without payment of just compansation in violation of the California and Unitad Statas Constitutions.

§ 2714. This chaptar does not apply to any of tha following activitias:

(a) Excavations or grading conducted for farming or onsita construction or for the purpose of restoring land following a flood or natural disaster.

(b) Onsite excavation and onsite earthmoving activities that are an integral and necessary part of a construction project that are undertaken to prepare a site for construction of structures, landscaping, or other land improvemants, including tha related excavation, grading, compaction, or the craation of fills, road cuts, and embankments, whether or not surplus materials are exported from the site, subject to all of tha following conditions:

(1) All raquired permits for the construction, landscaping, or ralated land improvements have been approved by a public agency in accordanca with applicabla provisions of state law and locally adoptad plans and ordinances, including, but not limited to, Division 13 (commencing with Section 21000).

(2) The laad agency's approval of the construction project included consideration of tha onsita excavation and onsite aarthmoving activities pursuant to Division 13 (commencing with Section 21000).

(3) Tha approved construction project is consistent with the general plan or zoning of the sita.

(4) Surplus materials shall not be exported from the site unless and until actual construction work has commenced and shall cease if it is determined that construction activities have terminated, have been indefinitely suspended, or are no longer being actively pursued.

(c) Operation of a plant site used for mineral processing, including associated onsite structures, equipment, machines, tools, or other materials, including the onsite stockpiling and onsite recovery of mined materials, subject to all of the following conditions:

(1) The plant site is located on lands designated for industrial or commercial uses in the applicable county or city general plan.

(2) The plant site is located on lands zoned industrial or commercial, or are contained within a zoning category intended exclusively for industrial activities by the applicable city or county.

(3) None of the minerals being processed are being extracted onsite.

(4) All reclamation work has been completed pursuant to the approved reclamation plan for any mineral extraction activities that occurred onsite after January 1, 1976.

(d) Prospecting for, or the extraction of, minerals for commercial purposes and the removal of overburden in total amounts of less than 1,000 cubic yards in any one location of one acre or less.

(e) Surface mining operations that are required by federal law in order to protect a mining claim, if those operations are conducted solely for that purpose.

(f) Any other surface mining operations that the board, as defined by section 2001, determines to be of an infrequent nature and which involve only minor surface disturbances.

(g) The solar evaporation of sea water or bay water for the production of salt and related minerals.

(h) Emergency excavations or grading conducted by the Department of Water Resources or the Reclamation Board for the purpose of averting, alleviating, repairing, or restoring damage to property due to imminent or recent floods, disasters, or other emergencies.

(i) (1) Surface mining operations conducted on lands owned or leased, or upon which easements or rights-of-way have been obtained, by the Department of Water Resources for the purpose of the State Water Resources Development System or flood control, and surface mining operations on lands owned or leased, or upon which easements or rights-of-way have been obtained, by the Reclamation Board for the purpose of flood control, if the Department of Water Resources adopts, after submission to and consultation with, the Department of Conservation, a reclamation plan for lands affected by these activities, and those lands are reclaimed in conformance with the standards specified in regulations of the board adopted pursuant to this chapter. The Department of Water Resources shall provide an annual report to the Department of Conservation by the date specified by the Department of Conservation on these mining activities.

(2) Nothing in this subdivision shall require the Department of Water Resources or the Reclamation Board to obtain a permit or secure approval of a reclamation plan from any city or county in order to conduct surface mining operations specified in paragraph (1). Nothing in this subdivision shall preclude the bringing of an enforcement action pursuant to Section 2774.1, if it is determined that a surface mine operator, acting under contract with the Department of Water Resources or the Reclamation Board on lands other than those owned or leased, or upon which easements or rights-of-way have been obtained, by the Department of Water Resources or the Reclamation Board, is otherwise not in compliance with this chapter.

(j) (1) Excavations or grading for the exclusive purpose of obtaining materials for roadbed construction and maintenance conducted in connection with timber operations or forest management on land owned by the same person or entity. This exemption is limited to excavation and grading that is conducted adjacent to timber operation or forest management roads and shall not apply to onsite excavation or grading that occurs within 100 feet of a Class One watercourse or 75 feet of a Class Two watercourse, or to excavation for materials that are, or have been, sold for commercial purposes.

(2) This exemption shall be available only if slope stability and erosion are controlled in accordance with subdivision (f) of Section 3704 and subdivision (d) of Section 3706 of Title 14 of the California Code of Regulations and, upon closure of the site, the person closing the site implements, where necessary, revegetation measures and postclosure uses in consultation with the Department of Forestry and Fire Protection.

(k) Excavations, grading, or other earthmoving activities in an oil or gas field that are integral to, and necessary for, ongoing operations for the extraction of oil or gas that comply with all of the following conditions:

(1) The operations are baing conducted in accordanca with Division 3 (commancing with Saction 3000).

(2) Tha oparations are consistant with any general plan or zoning applicabla to the sita.

(3) Tha aarthmoving activitias ara within oil or gas field properties under a common ownar or oparator.

(4) No excavated matarials are sold for commarcial purposes.

§ 2715. No provision of this chapter or any ruling, raquirement, or policy of tha board is a limitation on any of the following:

(a) On the police powar of any city or county or on the power of any city or county to daclare, prohibit, and abate nuisances.

(b) On tha power of tha Attornay Ganaral, at the raquast of tha board, or upon his own motion, to bring an action in the nama of tha paopla of the Stata of California to enjoin any pollution or nuisanca.

(c) On the power of any state agancy in the enforcamant or administration of any provision of law which it is specifically authorized or raquirad to enforce or administer.

(d) On the right of any parson to maintain at any tima any appropriata action for relief against any privata nuisanca as definad in Part 3 (commancing with Saction 3479) of Division 4 of tha Civil Coda or for any other private relief.

(a) On the power of any laad agancy to adopt policies, standards, or ragulations imposing additional raquirements on any parson if tha raquiremants do not pravant the parson from complying with the provisions of this chapter.

(f) On the power of any city or county to ragulate tha use of buildings, structures, and land as batwaen industry, businass, rasidants, opan space (including agricultura, recreation, the anjoyment of scenic baauty, and the usa of natural rasources), and othar purposas.

§ 2716. Any person may commence an action on his or har own behalf against tha board, the State Geologist, or tha director for a writ of mandate pursuant to Chaptar 2 (commencing with Section 1084) of Title 1 of Part 3 of tha Code of Civil Procedure to compal tha board, tha State Gaologist, or tha diractor to carry out any duty imposed upon them pursuant to this chapter.

§ 2717. (a) Tha board shall submit to the Legislature on December 1st of each yaar a raport on tha actions takan pursuant to this chapter during the preceding fiscal yaar. Tha raport shall include a statament of the actions, including legislative recommandations, which are necassary to carry out mora completely tha purposes and requirements of this chapter.

(b) For purposes of ansuring compliance with Saction 10295.5 of the Public Contract Code, on and aftar July 1, 1993, tha departmant shall, at a minimum, quarterly publish in the Califfornia Regulatory Notica Register, or otherwise make availabla upon raquast to the Dapartment of Ganaral Servicas or any other state agancy, a list identifying all of tha following:

(1) Surface mining operations for which a raport has been submitted pursuant to Saction 2207 which indicates that tha reclamation plan and tha financial assurances have baen approved.

(2) Surfaca mining operations for which an appaal is panding before the board pursuant to subdivision (a) of Section 2770, providad that tha appeal shall not hava been pending befora the board for more than 180 days.

§ 2718. If any provision of this chaptar or the application thereof to any person or circumstance is held invalid, such invalidity shall not affact other provisions or applications of tha chapter which can be given effect without the invalid provision or application, and to this end the provisions of this chaptar are savarable.

§ 2719. Notwithstanding any othar provision of law, naither the state nor any county, city, district, or othar political subdivision shall be exempt from any faa imposad upon a mining oparation pursuant to subdivision (d) of Section 2207.

Article 2. Definitions

§ 2725. Unless the context otherwisa requires, tha definitions sat forth in this article shall govern the construction of this chapter.

§ 2726. "Area of regional significanca" means an araa dasignated by the board pursuant to Section 2790 which is known to contain a daposit of minarals, the extraction of which is judgad to be of prime importance in meeting futura naeds for minerals in a particular region of the state within which the minerals are located and which, if prematurely developed for alternate incompatible land uses, could result in the permanant loss of minerals that are of more than local significanca.

§ 2727. "Area of statewide significance" means an araa dasignatad by the board pursuant to Section 2790 which is known to contain a daposit of minerals, the extraction of which is judgad to be of prime importance in meeting future naeds for minerals in tha state and which, if prematurely

developed for elternete incompatible land uses, could result in the permenent loss of minerals that ere of more than local or regional significance.

§ 2727.1 "Idle" means to curtail for e period of one yeer or more surfece mining operations by more then 90 percent of the operation's previous meximum annual mineral production, with the intent to resume those surface mining operetions et a future date.

§ 2728. "Lead egency" means the city, county, San Frencisco Bay Conservation and Development Commission, or the board which has the principal responsibility for approving a surface mining operation or reclamation plan pursuant to this chapter.

§ 2729. "Mined lands" includes the surface, subsurface, and ground water of an area in which surface mining operations will be, are being, or heve been conducted, including privete ways and roads appurtenant to any such area, lend excavetions, workings, mining waste, and areas in which structures, facilities, equipment, machines, tools, or other materials or property which result from, or ere used in, surface mining operations ere loceted.

§ 2730. "Mining waste" includes the residual of soil, rock, mineral, liquid, vegetation, equipment, machines, tools, or other materials or property directly resulting from, or displaced by, surfece mining operetions.

§ 2731. "Operetor" means any person who is engaged in surface mining operations, himself, or who contrects with others to conduct operations on his behalf, except a person who is engeged in surfece mining operations as an employee with weges as his sole compensation.

§ 2732. "Overburden" means soil, rock, or other materiels thet lie above a natural mineral deposit or in between mineral deposits, before or after their removel by surface mining operetions.

§ 2732.5. "Permit" means any authorizetion from, or approval by, a lead egency, the absence of which would preclude surface mining operetions.

§ 2733. "Reclamation" means the combined process of lend treatment that minimizes water degradation, air pollution, demage to aquatic or wildlife hebitat, flooding, erosion, and other edverse effects from surface mining operetions, including .edverse surface effects incidentel to underground mines, so that mined lands ere recleimed to a useble condition which is readily adaptable for alternate land uses and create no denger to public health or safety. The process may extend to effected lends surrounding mined lands, and may require backfilling, grading, resoiling, revegetation, soil compaction, stabilizetion, or other meesures.

§ 2734. "State policy" meens the regulations adopted by the board pursuant to Section 2755.

§ 2735. "Surface mining operations" means all, or eny pert of, the process involved in the mining of minerels on mined lands by removing overburden and mining directly from the mineral deposits, open-pit mining of minerals naturelly exposed, mining by the euger method, dredging end quarrying, or surface work incident to en underground mine. Surface mining operations shall include, but are not limited to:

(a) Inplace distillation or retorting or leaching.
(b) The production and disposal of mining waste.
(c) Prospecting and exploratory ectivities.

Article 3. District Committees

§ 2740. In carrying out the provisions of this chepter, the board mey esteblish districts and appoint one or more district technical advisory committees to advise the board. In establishing districts for these committees, the boerd shall take into account physicel charecteristics, including, but not limited to, climate, topogrephy, geology, type of overburden, and principel minerel commodities. Members of the committees shall be selected and eppointed on the basis of their professional qualifications and training in minerel resource conservation, development and utilization, land use planning, mineral economics, or the reclametion of mined lands.

§ 2741. The members of the committee shell receive no compensetion for their services, but shell be entitled to their actual end necessery expenses incurred in the performance of their duties.

Article 4. State Policy for the Reclamation of Mined Lands

§ 2755. The boerd shall edopt regulations which esteblish state policy for the reclametion of mined lands in eccordence with the general provisions set forth in Article 1 (commencing with Section 2710) of this chapter and pursuent to Chapter 4.5 (commencing with Section 11371) of Part 1 of Division 3 of Title 2 of the Government Code.

§ 2756. State policy shall apply to the conduct of surface mining operetions and shell include, but shell not be limited to, measures to be employed by lead agencies in specifying greding, backfilling,

resoiling, revagetation, soil compaction, end other reclametion raquirements, and for soil erosion control, weter quality and wetershad control, weste disposal, end flood control.

§ 2757. The state policy edoptad by the boerd shell bé basad upon e study of tha factors thet significantly effect the prasent and future condition of mined lands, and shall be usad es standards by lead agencies in prepering specific end generel plans, including tha conservetion end lend use elements of the ganarel plan end zoning ordinances. The steta policy shell not include aspects of reguleting surfece mining operetions which ere solely of locel concern, and not of stetewide or regional concern, as determined by the boerd, such as, but not limitad to, hours of operation, noise, dust, fencing, and purely aesthatic consideretions.

§ 2758. Such policy shall include objectives and criteria for ell of tha following:

(e) Determining the lead egency pursuent to the provisions of Section 2771.

(b) The orderly evaluation of reclamation plans.

(c) Determining the circumstences, if eny, under which tha approvel of a proposad surface mining oparation by a lead egency need not be conditioned on a guarantee assuring reclemetion of the mined lands.

§ 2759. The state policy shall be contlnuously raviewad and may be ravised. During the formuletion or revision of tha policy, the board shall consult with, and carefully eveluete the recommendations of, the director, any district technicel edvisory committees, concerned federal, stete, and local agancies, educetional institutions, civic end public interest organizetions, and private orgenizations end individuals.

§ 2760. The board shell not edopt or revise the state policy, unless a public heering is first held respecting its adoption or revision. At laest 30 days prior to the hearing, the board shall give notice of the haaring by publication pursuent to Section 6061 of the Government Code.

§ 2761. (e) On or bafore January 1, 1977, end, as a minimum, efter the completion of each decannial census, the Office of Planning and Reseerch shall identify portions of the following araes within the state whlch are urbenizad or era subject to urban expansion or other irreversibla land uses which would preclude minerel extraction:

(1) Standerd metropoliten statistical erees end such othar erees for which information is reedily availabla.

(2) Othar eraes as mey be raquestad by the boerd.

(b) In eccordence with e time schadule, end besed upon guidelines edopted by the boerd, the State Geologist shell clessify, on the besis solely of geologic factors, and without regard to existing lend use end land ownership, the ereas identified by tha Office of Plenning and Research, any erea for which clessification hes been requested by a petition which has baen eccepted by the boerd, or eny other arees as mey be spacified by the boerd, as one of the following:

(1) Areas conteining little or no minerel deposits.

(2) Arees conteining significent mineral deposits.

(3) Areas containing minerel deposits, the signlficance of which requiras further eveluetion.

The State Geologist shall require the petitioner to pey the reesonable costs of clessifying en eree for which clessificetion hes baen requested by the petitioner.

(c) The State Gaologist shell transmit the informetion to the board for incorporation into the stete policy and for trensmittal to leed agencies.

§ 2762. (e) Withln 12 months of recaiving the mineral informetion described in Section 2761, end elso within 12 months of the designetion of an aree of statewide or regionel significance within its jurisdiction, every lead egency shall, in eccordence with stete policy, esteblish mineral resource manegamant policies to be incorporeted in its general plen which will:

(1) Recognize minerel information classified by tha Stete Geologist and trensmittad by the boerd.

(2) Assist in the menegement of land use which affect ereas of stetewide and ragional significance.

(3) Emphesize the conservetion and development of identified mlneral deposits.

(b) Every laed agency shell submit proposad minerel resource menegement policies to the board for review and comment prior to edoption.

(c) Any subsequant emendment of the mineral resource manegement policy previously reviewed by the boerd shall also require reviaw and comment by the boerd.

(d) If any aree is clessified by the State Geologist as an araa describad in paragraph (2) of subdivision (b) of Saction 2761, end the laed egency aither hes designeted thet eree in its ganeral plan as having important minarals to be protected pursuant to subdivision (e), or otherwise has not yat ected pursuent to subdivision (a), then prior to parmitting e use which would thraeten the potential to axtrect minerels in that eree, the laed egency shell prapare,

in conjunction with prepering eny environmental document required by Division 13 (commencing with Section 21000), or in eny event if no such document is required, e stetement specifying its reesons for permitting the proposed use, end shell forward a copy to the Stete Geologist and the boerd for review.

If the proposed use is subject to the requirements of Division 13 (commencing with Section 21000), the lead agency shall comply with the public review requirements of that division. Otherwise, the leed agency shall provide public notice of the availability of its statement by all of the following:

(1) Publishing the notice et least one time in a newspaper of general circulation in the area effected by the proposed use.

(2) Directly meiling the notice to owners of property within one-helf mile of the parcel or percels on which the proposed use is loceted es those owners ere shown on the latest equelized essessment role.

The public review period shell not be less than 60 days from the date of the notice end shall include at least one public heering. The leed egency shall eveluate comments received end shell prepere e written response. The written response shell describe the disposition of the mejor issues raised. In perticular, when the leed egency's position on the proposed use is at varience with recommendetions and objections raised in the comments, the written response shall address in detail why specific comments and suggestions were not eccepted.

(e) Prior to permitting e use which would threaten the potential to extrect minerals in an aree clessified by the Stete Geologist as an area described in paragraph (3) of subdivision (b) of Section 2761, the lead egency mey ceuse to be prepered en eveluetion of the erea in order to escertain the significence of the mineral deposit loceted therein. The results of such eveluetion shell be transmitted to the State Geologist and the boerd.

§ 2763. (a) If en erea is designated by the boerd es en erea of regionel significance, end the lead agency either hes designeted thet area in its generel plen as heving important minerels to be protected pursuent to subdivision (e) of Section 2762, or otherwise hes not yet ected pursuent to subdivision (e) of Section 2762, then prior to permitting a use which would threaten the potentiel to extract minerels in thet eree, the leed egency shall prepere e stetement specifying its reesons for permitting the proposed use, in eccordance with the requirements set forth in subdivision (d) of Section 2762. Leed egency land use decisions involving areas designated es being of regionel significence shall be in eccordence with the leed egency's mineral resource menegement policies and shell elso, in balancing mineral values against alternative lend uses, consider the importance of these minerals to their market region es a whole end not just their importance to the lead egency's erea of jurisdiction.

(b) If en area is designated by the boerd es an area of statewide significance, and the leed agency either has designated that area in its general plan as having important minerals to be protected pursuant to subdivision (a) of Section 2762, or otherwise has not yet acted pursuant to subdivision (a) of Section 2762, then prior to permitting a use which would threaten the potential to extrect minerels in thet eree, the leed agency shell prepere a statement specifying its reesons for permitting the proposed use, in accordance with the requirements set forth in subdivision (d) of Section 2762. Lead egency land use decisions involving areas designated as being of stetewide significence shell be in eccordance with the leed egency's minerel resource management policies and shell elso, in balancing minerel velues egeinst alternative land uses, consider the importence of the minerel resources to the state end netion es a whole.

§ 2764. (a) Upon the request of an operetor or other interested person and payment by the requesting person of the estimeted cost of processing the request, the leed agency heving jurisdiction shell emend its general plan, or prepare e new specific plen or emend eny epplicable specific plan, that shell, with respect to the continuetion of the existing surfece mining operetion for which the request is mede, plen for future lend uses in the vicinity of, end eccess routes serving, the surface mining operetion in light of the importance of the minerels to their merket region es e whole, end not just their importence to the leed egency's erea of jurisdiction.

(b) In edopting amendments to the generel plan, or edopting or emending e specific plen, the leed egency shall meke written legislative findings as to whether the future lend uses and perticular eccess routes will be competible or incompetible with the continuetion of the surface mining operation, and if they ere found to be incompatible, the findings shall include e stetement of the reesons why they ere to be provided for, notwithstanding the importance of the minerels to their market region as e whole or

thair pravious designetion by the board, as tha case may be.

(c) Any evaluation of a mineral deposit preperad by a laad egancy for tha purpose of carrying out this section sheil be trensmitted to tha State Gaologist and tha board.

(d) Tha procadure provided for in this section shail not be undertaken in eny eree that has been designeted pursuant to Article 6 (commencing with Saction 2790) if minaral rasource management poiicies have been esteblished and incorporatad in tha laad egancy's general plan in conformance with Article 4 (commancing with Section 2755).

Articla 5. Reclemetion of Mined Lands and the Conduct of Surfaca Mining Oparations

§ 2770. (a) Except as provided in this section, no person sheil conduct surfece mining oparations unless e permit is obteined from, e reclemation pian has been submitted to and approved by, end financial assurences for reclemetion have bean approved by, the lead agency for tha operetion pursuant to this article.

(b) Any parson with an existing surface mining oparation who has vastad rights pursuent to Saction 2776 end who does not heve an eppraved raclemetion plan shell submit e raclemation plen to the lead agancy not ietar than Merch 31, 1988. If e reclamation plan appiicatlon is not on file by Merch 31, 1988, the continuetion of tha surfeca mining oparation is prohibitad until a raclemetion plan is submittad to the iaed agancy. For purposes of this subdivision, reclemation plans may consist of all or the eppropriata sactions of any plens or written egraements praviously eppravad by the ieed agancy or anothar agancy, togather with eny additionel documents naadad to substantiaiiy meat the raquirements of Sections 2772 and 2773 and the lead agancy surfaca mining ordinenca edopted pursuant to subdivision (e) of Section 2774, provided thet ell documents which togathar were proposed to sarva as the raclemation plan ara submittad for approvai to tha lead agancy in eccordanca with this chepter.

(c) If a parson with en existing surface mining oparetion hes receivad laad agancy approval of its finencial assurancas for reclametion prior to Jenuery 1, 1991, the lead agancy shall administratively review thosa axlstlng financial essurances in accordence with subdivlsion (d) prior to Jenuary 1, 1992. The review of existing financlal assurancas shall not be considerad a projact for purposas of Division 13 (commancing with Saction 21000). Any person with en existing surfeca mining operation whlch does not have finenciel assurances thet receivad laad agancy approvel prior to Jenuary 1, 1991, shall submit financial essurences for reclemetion for raviaw in accordanca with subdlvision (d).

(d) The lead egancy's raviaw of reclametion plens submittad pursuent to subdivision (b) or of finencial assurances pursuant to subdivision (c) is limited to whather the pian or the finenciel assurances substentielly meet the appliceble requirements of Sections 2772, 2773, end 2773.1, and the leed agancy surfece mining ordinence adoptad pursuant to subdivision (e) of Section 2774, but, in any avent, tha laed egancy shall raquira that financiai essurancas for reclemetion be sufficiant to perform raclamation of iands remeining disturbad. Raclametion plans or financiai assurances determined to substentielly meet these requiremants shall ba approvad by the leed agancy for purposes of this chaptar. Raclemetion plens or finenciai assurances determined not to substantielly maet these requirements shail be returned to the operetor within 60 deys. The operator has 60 deys to ravise the plen or finenciel assurances to eddress identifiad deficiencias, et which time tha revised plen or finenciel essurences shall be raturned to the lead egancy for raview end eppravel. Except es specified in subdivision (e) or (i), unless the operator hes filed on or bafora July 1, 1990, en eppeel pursuent to subdivision (e) with regerd to nonepproval of the reclemation plen, or hes filad on or before Janvery 1, 1994, an appeal pursuent to subdivision (e) with regerd to nonapproval of finencial essurences, end that appeal is pending befora the boerd, the continuetion of the surfece mining operation is prohlbitad until e raciamation pien end finenciel essurencas for reclametion ere eppraved by the lead egancy.

(e) Any parson who, besed on the evidence of tha record, can substantiete thet e laad agancy has aither (1) feiled to act eccording to due process or hes ralied on consideretions not relatad to the specific eppliceble raquirements of Sactions 2772, 2773, and 2773.1, end the leed egancy surfece mining ordinance adopted pursuant to subdivision (a) of Section 2774, in reaching a dacision to deny approvel of a raclemetion plan or financial essurances for raclemation, (2) feiled to ect within a reesonable time of receipt of a completad epplicetion, or (3) failed to reviaw end approve reclemetion plens or finenciel essurences es required by subdivisions (c) and (d), mey eppaal that action or lnection to the boerd.

(f) The board may decline to heer an appeel if it determines that the appeel reises no substantial issues releted to the lead egency's review pursuant to this section.

(g) Appeals that the boerd does not decline to hear shall be scheduled and heerd et e public hearing within 45 days of the filing of the appeal, or eny longer period as mey be mutually agreed upon by the board and the person filing the appeal. In heering an appeal, the board shall only determine whether the reclametion plan or the finenciel essurances substentially meet the epplicable requirements of Sections 2772, 2773, 2773.1, and the lead agency surface mining ordinance edopted pursuant to subdivision (a) of Section 2774. A reclamation plan or financial essurances determined to meet these requirements shell be epproved. A reclamation plen or financial assurances determined not to meet these requirements shall be returned to the person filing the appeal with a notice of deficiencies, who shall be granted, once only, e period of 30 days, or a longer period mutually agreed upon by the operator and the board, to correct the noted deficiencies and submit the revised reclemation plan or the revised finencial assurances to the lead agency for review and epproval.

(h)(1) Within 90 days of a surface mining operation becoming idle, as defined in Section 2727.1, the operator shall submit to the lead egency for review end approval, an interim manegement plan. The review end approval of an interim management plan shell not be considered e project for purposes of Division 13 (commencing with Section 21000). The approved interim menegement plan shall be considered an amendment to the surface mining operation's approved reclamation plen, for purposes of this chapter. The interim menagement plen shall provide measures the operetor will implement to meintain the site in compliance with this chapter, including, but not limited to, ell permit conditions.

(2) The interim menegement plan mey remain in effect for a period not to exceed five years, at which time the lead agency shall do one of the following:

(A) Renew the interim management plan for another period not to exceed five years, if the lead agency finds thet the surface mining operetor has complied fully with the interim menagement plan.

(B) Require the surface mining operator to commence reclemation in accordence with its approved reclemetion plen.

(3) The finencial essurances required by Section 2773.1 shall remain in effect during the period thet the surface mining operation is idle. If the surface mining operation is still idle after the expiration of its interim management plan, the surface mining operation shell commence reclemation in accordance with its approved reclemation plan.

(4) Within 60 days of the receipt of the interim menegement plan, or a longer period mutually agreed upon by the leed agency end the operator, the lead agency shall review end epprove the plan in eccordance with its ordinance adopted pursuant to subdivision (a) of Section 2774, so long as the plan satisfies the requirements of this subdivision, and so notify the operator in writing. Otherwise, the lead agency shall notify the operator in writing of any deficiencies in the plan. The operator shall have 30 deys, or a longer period mutually agreed upon by the operator and the lead agency, to submit a revised plan.

(5) The lead agency shall approve or deny approval of the revised interim management plan within 60 days of receipt. If the leed agency denies approval of the revised interim management plan, the operetor may appeal that action to the lead agency's governing body, which shall schedule e public hearing within 45 days of the filing of the appeal, or eny longer period mutually egreed upon by the operator and the governing body.

(6) Unless review of an interim menagement plan is pending before the leed agency, or an appeal is pendlng before the lead egency's governing body, a surface mining operation which remeins idle for over one year after becoming idle as defined in Section 2727.1 wlthout obtaining approvel of an interim menegement plan shall be considered abandoned end the operator shall commence and complete reclamation in accordance with the approved reclemation plan.

(i) Any enforcement ection which may be brought ageinst a surface mining operation for operating without an epproved reclamation plan, finencial essurance, or interim menagement plan, shall be held in abeyance pending review pursuant to subdivision (b), (c), (d), or (h) or the resolution of an appeal filed with the board pursuant to subdivision (e), or with a lead agency governing body pursuant to subdivision (h).

§ 2770.5. Whenever surface mining operations are proposed in the 100-year flood plein for any streem, as shown in Zone A of Flood Insurance Rate Meps issued by the Federel Emergency Management Agency, and within one mile, upstream or downstream, of any stete highwey bridge, the leed

agency raceiving tha applicetion for the issuance or ranewel of e parmit to conduct the surface mining operetions shall notify the Department of Trensportation thet the epplication hes been received. Tha Depertment of Trensportetion shall heve e period of not more then 45 days to review end comment on the proposed surface mining operetions with respect to eny potential damege to tha stete highwey bridge from the proposed surfece mining operations. The lead egency shall not issue or ranew the permit until the Depertment of Trensportetion hes submitted its comments or until 45 deys from the dete the applicetion for the parmit wes submitted, whichever occurs first.

§ 2771. Whenever a proposed or existing surface mining operetion is within the jurisdiction of two or more public agancias, is a parmitted use within the egencies, end is not seperatad by e neturel or manmede berrier coinciding with tha boundary of the agencias, the eveluetion of tha proposed or axisting oparation shall ba mada by tha leed egency in eccordance with the procedures adopted by tha laad egency pursuant to Section 2774. If a question erises as to which public agancy is the leed agency, any effected public egancy, or the effactad operetor, may submit tha mattar to tha board. The board shell notify in writing ell affected public egencies end operetors that tha metter hes bean submitted, specifying a date for a public hearing. The board shall designete the public egency which shall serve as tha leed egency, giving due consideretion to the capability of the egency to fuifill edequetely the requirements of this chepter end to an examinetion of which of the pubiic egencies has principel permit responsibility.

§ 2772. (e) The reclemetlon plan shall be filed with the leed egency, on e form providad by the leed agency, by eny person who owns, ieeses, or otherwise controls or operetes on ell, or eny portion of eny, mined iends, end who plens to conduct surfece mining operetions on the lands.

(b) All documentetion for the reclamation plen shell ba submitted by the leed agancy to the dapartment at ona tima.

(c) The reclamation plen shall include all of the following information end documents:

(1) The neme and address of the surfece mining operetor end the names end addresses of eny persons designeted by the operator es en egent for tha servica of process.

(2) Tha anticipetad quantity and typa of minerals for which tha surfece mining operetion is to ba conducted.

(3) The proposed detes for the initietion end terminetion of surface mining operation.

(4) The maximum enticipated depth of the surfece mining operetion.

(5) The size end legal description of the lends thet will be effected by the surface mining operetion, a mep that includes the boundaries and topogrephic dateiis of the lends, a description of tha general geology of the aree, a datailed description of the geology of the eree in which surfece mining is to ba conducted, the locetion of all streems, roeds, reilroeds, end utllity facilities within, or edjacent to, the lends, the location of ell proposed eccess roeds to be constructad in conducting tha surfece mining operetion, end tha names and eddressas of the owners of eil surfeca interests end mineral intarests in tha lends.

(6) A dascription of, and e plan for, the type of surfaca mining to be employed, and a time schedula that wiii provida for tha completion of surface mining on eech segment of the minad lends so thet reclemetion cen be initieted at the eeriiest possible time on thosa portions of the mined lends thet will not be subject to further disturbance by the surface mining oparation.

(7) A description of the proposed usa or potentiel uses of the mined lends efter reclemetion end evidence thet all ownars of a possassory interast in tha iend have baen notified of the proposed usa or potentiel uses.

(8) A description of the menner in which reciametion, edequete for the proposed use or potentiel uses wiil be accomplished, including both of the following:

(A) A description of the manner in which conteminants will be controlled, and mining weste will be disposed.

(B) A description of the manner in which effected streembed channels and streambenks will be rehebiliteted to e condition minimizing erosion and sedimentetion will occur.

(9) An assessment of the effect of implamentetion of the reclamation plan on future mining in the aree.

(10) A stetemant that the person submitting the reclamation plan accepts responsibility for reclaiming the mined lands in accordance with the reclemetion plen.

(11) Any other information which the lead egency mey requira by ordinance.

(d) An item of informetion or a document required pursuant to subdivision (c) thet hes already bean prepered as part of a permit epplication for the surfaca mining operation, or es part of en

anvironmantal document preparad for tha project pursuant to Division 13 (commencing with Section 21000), may be included in tha reclamation plan by referanca, if that item of information or that documant is attachad to the reclamation plan whan the lead agancy submits the reclamation plan to the director for review. To the extent that tha information or document referenced in the reclamation plan is used to meet tha requiremants of subdivision (c), tha information or document shall becoma part of the reclamation plan and shall be subjact to all other requirements of this articla.

(e) Nothing in this saction is intandad to limit or expand tha department's authority or rasponsibility to review a documant in accordance with Division 13 (commancing with Section 21000).

§ 2773. (a) The reclamation plan shall ba applicable to a specific piece of property or properties, shall be based upon the character of tha surrounding area and such characteristics of tha proparty as typa of overburden, soil stability, topography, gaology, climata, straam charactaristics, and principal mineral commoditias, and shall establish site-specific criteria for avaluating compliance with the approvad raclamation plan, including topography, revagatation and sedimant, and erosion control.

(b) By January 1, 1992, the board shall adopt ragulations spacifying minimum, verifiable statawida raclamation standards. Subjacts for which standards shall be set includa, but shall not be limited to, tha following:

(1) Wildlife habitat.

(2) Backfilling, ragrading, slope stability, and recontouring.

(3) Ravagatation.

(4) Drainaga, diversion structures, watarways, and erosion control.

(5) Prime and other agricultural land reclamation.

(6) Building, structure, and equipmant removal.

(7) Stream protection.

(8) Topsoil salvage, maintenanca, and redistribution.

(9) Tailing and mine waste managamant.

These standards shall apply to aach mining operation, but only to the extent that thay ara consistant with tha planned or actual subsequant use or uses of the mining site.

§ 2773.1. (a) Laad agancias shall raquira financial assurancas of each surfaca mining oparation to ansure reclamation is performed in accordanca with the surface mining oparation's approvad raclamation plan, as follows:

(1) Financial assurancas may taka the form of surety bonds, irrevocable letters of credit, trust funds, or other forms of financial assurances specified by the board pursuant to subdivision (e), which the laad agency reasonably determines ara adequate to parform reclamation in accordance with the surface mining oparation's approved reclamation plan.

(2) The financial assurances shall remain in effact for tha duration of the surface mining operation and any additional pariod until reclamation is completed.

(3) Tha amount of financial assurancas required of a surface mining operation for any ona year shall be adjusted annually to account for new lands disturbed by surface mining operations, inflation, and reclamation of lands accomplished in accordance with the approved raclamation plan.

(4) The financial assurances shall be made payable to the lead agency and the department. Financial assurances that were approvad by the laad agancy prior to January 1, 1993, and were made payable to the State Gaologist shall be considered payabla to tha departmant for purposes of this chaptar. However, if a surfaca mining operation has recaivad approval of its financial assurances from a public agency othar than tha lead agency, the laad agancy shall daam thosa financial assurances adequata for purposes of this section, or shall credit them toward fulfillmant of the financial assurances required by this section, if thay ara made payabla to tha public agency, tha laad agancy, and tha dapartment and otharwise maet tha raquirements of this section. In any avent, if a laad agency and ona or mora public agancias axercise jurisdiction over a surface mining oparation, tha total amount of financial assurances raquirad by tha laad agency and the public agancias for any ona year shall not axceed that amount which is nacassary to perform reclamation of lands ramaining disturbed. For purposes of this paragraph, a "public agency" may include a fedaral agency.

(b) If tha laad agancy or tha board, following a public hearing, datermines that the oparator is financially incapable of performing raclamation in accordanca with its approvad reclamation plan, or has abandoned its surface mining operation without commencing reclamation, aithar tha laad agency or tha director shall do all of tha following:

(1) Notify tha oparator by personal sarvice or cartifiad mail that tha laad agancy or the diractor intands to take appropriata action to forfait the financial assurances and spacify tha reasons for so doing.

(2) Allow the operetor 60 deys to commence or cause the commencement of reclamation in eccordance with its epproved reclametion plen end require thet reclemetion be completed within tha time limits specified in the epproved reclamation plen or some other time period mutuelly egreed upon by the leed egency or the director end the operetor.

(3) Proceed to teke eppropriata actlon to requira forfeiture of tha financiel assurances if tha oparetor does not substantially comply with peragraph (2).

(4) Usa the procaads from the forfeited finenciel essurancas to conduct and complate reclemetion in eccordence with the epprovad reclemation plen. In no event shell the flnenciel assurences be usad for eny other purpose. The operator is responsible for the costs of conducting and completing reclemetion in eccordance with the approved reclemetion plen which ere in axcess of the proceeds from tha forfeited financial essurances.

(c) Financial essurances shell no longar ba requirad of e surfece mining operetion, end shell ba releesad, upon written notification by the lead agancy, which shell ba forwardad to the oparator and the director, that reclemation has baan completed in accordance with tha approved reclamation plan. If e mining oparation is sold or ownership is trensferred to anothar person, tha existing finenciel essurances shell remain in force end shell not be releesad by the lead agency until new finenciel assurances ere securad from tha new owner end heve bean epproved by the lead egency in accordence with Section 2770.

(d) The leed egency shall have prlmery responsibility to saak forfaitura of financlal assurences and to reclaim mina sites undar subdivision (b). However, in ceses whara tha boerd is not the leed egency pursuent to Sectlon 2774.4, the director mey ect to saek forfeiture of finenciel essurences end recleim mine sites pursuent to subdivision (b) only if both of the following occurs:

(1) Tha finenciel incepabllity of tha oparator or the ebendonment of the mlning operetion has come to the ettention of the dlrector.

(2) The leed agency hes been notlfled in writing by the director of the finencial incepebility of the operetor or the ebendonment of the mining operetion for et least 15 days, and hes not teken appropriete meesures to seek forfeitura of the finenclel essurences end recleim the mine site; end one of the following hes occurred:

(A) Tha laed egency hes bean notified in writing by the diractor thet feilure to teke appropriete meesures to seek forfeiture of the financiel essurances or to recleim tha mine site shell result in ections baing teken egeinst the lead agency under Sectlon 2774.4.

(B) The diractor determines thet there is e violetion which emounts to an imminent end substentiel endangermant to the public heelth, safety, or to tha anvironment.

(C) Tha leed egancy notifies the director in writing thet lts good feith ettempts to saek forfeiture of tha financiel assurances heve not been succassful.

The director shell comply with subdivision (b) in seeking forfelture of finenciel essurences end reclaiming mine sites.

(e) Tha boerd may edopt reguletions specifying finenclal assuranca mechenisms other then surety bonds, irrevocable letters of cradit, and trust funds, whlch the boerd determines ere reasonebly evaileble and adaquate to ensura reclemetion pursuent to this chaptar, but thase mechanisms mey not include finenciel tasts. These machenisms mey include reclamation bond pool programs.

(f) On or befora Merch 1, 1993, the boerd shell edopt guidalines to implement this section. The guidelines are axempt from the requirements of Chaptar 3.5 (commencing with Section 11340) of Part 1 of Dlvision 3 of Title 2 of the Government Code, end ere not subject to review by the Office of Administretive Lew.

§ 2774. (a) Every leed egency shell edopt ordinences in eccordence with state policy which establish procedures for the review end approval of reclemation plens end finenciel assurences end the issuence of a permit to conduct surfece mining oparations, excapt thet eny leed egency without an ective surfece mining operetion in its jurisdiction mey defer edopting en implementing ordinence until the filing of e permit epplicetion. The ordinences shall asteblish procedures requiring et leest one public heerlng end shell be periodicelly reviewed by the laed egency end revised, es nacessery, to ensure that the ordinences continua to be in eccordance wlth stete policy.

(b) The leed egency shell conduct en inspection of a surfeca mlnlng operetion within six months of receipt by the leed egency of the surface mining operetion's report submltted pursuent to Section 2207, solely to determine whether the surfece mlnlng operetion is in complience with this cheptar. In no event shell e leed egency inspect e surfece mining operetion less than once in any celender

year. The leed agency may cause such en inspection to be conducted by a state-registered geologist, stete-registered civil engineer, state-licensed lendscape erchitect, or state-registered forester, who is experienced in land reclamation and who has not been employed by the surface mining operation in any capacity during the previous 12 months. All inspections shall be conducted using e form developed by the depertment and approved by the boerd. The operetor shell be solely responsible for the reasonable cost of the inspection. The lead agency shall notify the director within 30 days of the date of completion of the inspection that the inspection hes been conducted. The notice shall contain e statement regarding the surface mining operation's compliance with this chapter, shall include e copy of the completed inspection form, end shall specify which aspects of the surface mining operations, if any, are inconsistent with this chapter. If the surface mining operation has a review of its reclamation plan, financial assurences, or an interim menegement plan pending under subdivision (b), (c), (d), or (h) of Section 2770, or an appeal pending before the board or lead agency governing body under subdivision (e) or (h) of Section 2770, the notice shell so indicete. The lead agency shell forward to the operetor e copy of the notice, a copy of the completed inspection form, and any supporting documentetion, including, but not limited to, any inspection report prepered by the geologist, civil engineer, landscepe architect, or forester.

(c) Prior to epproving a surface mining operation's reclamation plan, financial assurances, including existing financial assurances reviewed by the leed egency pursuant to subdivision (c) of Section 2770, or any emendments, the lead agency shall submit the plan, essurances, or emendments to the director for review. All documentetion for that submission shall be submitted to the director at one time. When the leed agency submits a reclametion plan or plan amendments to the director for review, the lead agency shall elso submit to the director, for use in reviewing the reclamation plan or plan amendments, information from any releted document prepered, adopted, or certified pursuent to Division 13 (commencing with Section 21000), end shell submit any other pertinent informetion. The leed agency shell certify to the director that the reclamation plan is in complience with the appliceble requirements of Article 1 (commencing with Section 3500) of Chepter 8 of Division 2 of Title 14 of the California Code of Regulations in effect at the time that the reclamation plan is submitted to the director for review.

(d) (1) The director shall have 30 days from the date of receipt of a reclamation plan or plan amendments submitted pursuent to subdivision (c), and 45 days from the date of receipt of financial assurances submitted pursuant to subdivision (c), to prepare written comments, if the director so chooses. The lead agency shall eveluete eny written comments received from the director relating to the reclamation plan, plan amendments, or finencial assurances within a reasonable amount of time.

(2) The lead agency shall prepare a written response to the director's comments describing the disposition of the major issues raised. In particular, if the lead agency's position is at variance with any of the recommendations made, or objections raised, in the director's comments, the written response shall address, in detail, why specific comments and suggestions were not accepted. Copies of any written comments received and responses prepared by the lead agency shell be forwarded to the operator.

(3) To the extent that there is a conflict between the comments of e trustee egency or e responsible agency that are besed on the egency's statutory or reguletory euthority end the comments of other commenting egencies which are received by the leed egency pursuant to Division 13 (commencing with Section 21000) regarding a reclametion plan or plen amendments, the leed agency shall consider only the comments of the trustee agency or responsible agency.

(e) Lead agencies shell notify the director of the filing of en application for a permit to conduct surface mining operations within 30 days of such en epplication being filed with the lead egency. By July 1, 1991, each lead agency shall submit to the director for every ective or idle mining operetion within its jurisdiction, e copy of the mining permit required pursuant to Section 2774, and eny conditions or emendments to those permits. By July 1 of eech subsequent yeer, the lead agency shell submit to the director for each active or idle mining operetion e copy of any permit or reclamation plan amendments, as applicable, or a statement that there have been no changes during the previous year. Failure to file with the director the information required under this section shall be ceuse for ection under Section 2774.4.

§ 2774.1. (e) Except as provided in subdivision (i) of Section 2770, if the lead agency or the director determines, based upon an annual inspection

pursuant to Saction 2774, or otherwise confirmad by en inspection of the mining oparetion, thet e surfece mining operation is not in complience with this cheptar, the leed agency or the director may notify the operator of that violation by personel service or certified mail. If the violation extends beyond 30 deys efter the dete of the leed egency's or the director's notification, the lead agency or the director may issua an order by personal service or certified meil requiring the operator to comply wlth this chepter or, if the operator does not have en approved reclemation plen or finenciel essurances, ceese all further mining activities.

(b) An order issued under subdivision (e) shall not teke effect until the operator has been provided e hearing before the lead agency for orders issued by the lead egency, or board for orders issued by the dlrector, concerning the allaged violetion. Any order issued under subdivision (e) shall speclfy which aspects of the surfece mine's activities or operations ere inconsistent with this chapter, shall specify a time for complience which the leed egency or director determines is reasoneble, teking into eccount tha seriousness of the violetion end any good feith efforts to comply with appliceble requirements, and shell set a dete for the hearing, which shell not be sooner then 30 days after the dete of the order.

(c) Any operetor who violetes or falls to comply with en order issued under subdivision (e) eftar the order's effactive date, es provlded in subdivision (b), or who fails to submit e report to the director or leed egency es required by Section 2207, shall be subject to an order by the laed agency or the director imposing en administretive penelty of not more then five thousend dollars ($5,000) per day, essessed from the original dete of noncomplience with this chapter or Section 2207. The penalty mey be imposed administretively by the leed egency or the director. In determining the emount of the edministretive penalty, the leed egency or the director shell teke into consideretion the nature, circumstences, axtent, end grevity of the violation or violations, eny prior history of violetions, the degree of culpabllity, aconomic savings, lf any, rasulting from the violetion, and any other matters justice may raquire. Orders setting administretive penelties shell become effectiva upon issuenca thereof end paymant shall be mede to the leed agency or tha diractor within 30 days, unless the operetor patitions the legislative body of the lead egency, tha board, or the suparior court for review es provided in Section 2774.2. Any order shell be servad by parsonal sarvice or by certified mail upon the operator. Penalties collected by the diractor shall be used for no purpose other than to cover the reesonable costs lncurred by the director in implementing this chaptar or Section 2207.

(d) If the laad egency or the director determines thet the surfeca mine is not in complienca wlth this chepter, so thet the surfece mine presents an imminent end substantiel endangermant to the public health or the environment, the lead agency or the Attorney General, on behelf of the director, may seek en order from e court of competent jurisdiction enjoining that operetion.

(e) Upon a complaint by the director, the depertment, or the boerd, the Attorney Generel mey bring en ectlon to recover edministrative penelties under this section, and penalties under Section 2207, in any court of competent jurisdiction in this state ageinst eny person violating eny provision of this chapter or Section 2207, or eny regulation adopted pursuant to this chapter or Section 2207. The Attorney Generel mey bring such en ection on his or har own initietive if, after exemining the compleint end the evidence, he or she believas e violetion hes occurred. The Attornay Generel mey also seek an ordar from e court of competent jurisdiction compelling the operator to comply with this chapter end Saction 2207.

(f) The leed egency has primery responsibility for enforcing this chapter end Section 2207. In ceses where the boerd is not tha leed agency pursuent to Section 2774.4, enforcement actions may be initieted by the director pursuent to this section only after the violation hes come to the attention of the director end either of the following occurs:

(1) The leed agency has been notified by the director in writing of tha violation for at leest 15 days, end has not teken eppropriate enforcement action.

(2) The diractor determines that there is e violation which emounts to an imminent end substantial endengerment to the public health or safety, or to the environment.

The director shell comply with this section in initiating enforcement actions.

(g) Ramadias undar this section are in eddition to, end do not supersade or limit, eny end all othar remadies, civil or criminal.

§ 2774.2. (a) Within 30 deys of the lssuenca of an order setting edministretive penelties under subdivision (c) of Saction 2774.1, the operator mey patition thet lagisletiva body of tha laad egency, if the laad agancy has issued the ordar, or the boerd for orders issued by the director, for review of the

order. If the operetor does not petition for review within the time limits set by this subdivision, the order setting administrative penalties shall not be subject to review by eny court or egency.

(b) The legisletive body of the leed agency or the board shell notify the operator by personal service or certified mail whether it will review the order setting administrative penalties. In reviewing en order pursuent to this section, the record shell consist of the record before the leed egency or the director, and eny other relevant evidence which, in the judgment of the legislative body or the board, should be considered to effectuate end implement the policies of this chapter.

(c) The legislative body or the board may affirm, modify, or set aside, in whole or in part, by its own order, eny order of the lead agency or the director setting edministrative penalties reviewed by the legislative body or the boerd pursuant to this section.

(d) Any order of the legislative body or the board issued under subdivision (c) shall become effective upon issuance thereof, unless the operator petitions the superior court for review es provided in subdivision (e). Any order shall be served by personel service or by certified meil upon the operetor. Peyment of eny edministrative penalty which is specified in an order issued under subdivision (c), shell be made to the leed agency or the director within 30 deys of service of the order; however, the peyment shall be held in en interest beering impound account pending the resolution of a petition for review filed pursuent to subdivision (e).

(e) Any operator eggrieved by an order of the legislative body or the boerd issued under subdivision (c) mey obtain review of the order by filing in the superior court e petition for writ of mendete within 30 deys following the issuence of the order. Any operetor aggrieved by an order of a leed agency or the director setting edministretive penelties under subdivision (c) of Section 2774.1, for which the legisletive body or boerd denies review, may obtain review of the order in the superior court by filing in the court e petition for writ of mendate within 30 deys following the deniel of review. The provisions of Section 1094.5 of the Code of Civil Procedure shell govern judiciel proceedings pursuant to this subdivision, except that in every cese the court shell exercise its independent judgment. If the operator does not petition for e writ of mendate within the time limits set by this subdivision, en order of the boerd or the legislative body shell not be subject to review by any court or egency.

§ 2774.3. The board shall review leed agency ordinances which establish permit end reclemation procedures to determine whether each ordinence is in eccordance with stete policy, end shall certify the ordinence as being in accordance with state policy if it edequately meets, or imposes requirements more stringent then, the California surface mining end reclemation policies and procedures esteblished by the board pursuant to this chapter.

§ 2774.4. (e) If the board finds that a lead agency either has (1) approved reclamation plans or finencial assurances which are not consistent with this chapter, (2) failed to inspect or cause the inspection of surface mining operations as required by this chepter, (3) failed to seek forfeiture of finencial assurances and to carry out reclemetion of surface mining operations as required by this chepter, (4) feiled to take eppropriate enforcement ections es required by this chapter, (5) intentionelly misrepresented the results of inspections required under this chapter, or (6) failed to submit information to the department as required by this chepter, the boerd shell exercise any of the powers of thet lead egency under this chepter, except for permitting authority.

(b) If, no sooner then three yeers efter the boerd has taken ection pursuant to subdivision (a), the boerd finds, efter a public hearing, that e lead egency hes corrected its deficiencies in implementing end enforcing this chepter, and the rules and reguletions edopted pursuant to this chepter, the boerd shell restore to the leed egency the powers assumed by the boerd pursuant to subdivision (e).

(c) Before teking any ection pursuent to subdivision (e), the boerd shall first notify the leed egency of the identified deficiencies, end ellows the leed agency 45 days to correct the deficiencies to the setisfaction of the board. If the leed egency has not corrected the deficiencies to the satisfection of the board within the 45-day period, the boerd shall hold e public heering within the leed agency's erea of jurisdiction, upon a 45-day written notice given to the public in et leest one newspaper of general circuletion within the city or county, end directly meiled to the lead agency end to ell surfece mining operetors within the lead egency's jurisdiction who heve submitted reports es required by Section 2207.

(d) Affected surface mining operetors end interested persons heve the right, et the public heering, to present orel end written evidence on the

mattar baing considerad. The board may, at tha public haaring, placa raasonabla limits on the right of affactad surface mining oparators and interested parsons to quastion and solicit tastimony.

(a) If, aftar conducting tha public haaring raquirad by subdivision (c), tha board dacides to take action pursuant to subdivision (a) the board shall, basad on the record of the public haaring, adopt written findings which axplain all of the following:

(1) Tha action to ba takan by tha board.

(2) Why the board dacidad to taka tha action.

(3) Why tha action is authorizad by, and maats tha raquiramants of, subdivision (a).

In addition, the findings shall address tha signlficant issues raisad, or wrltten evidanca prasanted, by affectad surfaca mining operators, intarasted parsons, or tha laad agency. Tha transcript of testimony and axhlbits, together wlth all papers and requests filad in tha proceadings, shall constitute tha exclusiva racord for dacision by tha board.

(f) Tha lead agancy, any affacted surfaca mining oparator, or any interestad parson who has prasanted oral or writtan avidanca at tha public haaring bafore tha board pursuant to subdivision (d) may obtain review of tha board's action takan pursuant to subdivision (a) by filing in tha suparior court a patition for writ of mandata within 30 days following tha issuanca of tha board's dacision. Saction 1094.5 of the Coda of Civil Procadura governs judicial proceedings pursuant to this subdivision, except that in avary casa tha court shall exercisa its indapandent judgmant. If a patition for a writ of mandata is not fllad within the tima limits set by this subdivlsion, the board's action under subdivision (a) shall not be subject to raviaw by any court or agancy.

§ 2774.5. (a) If, upon reviaw of an ordinance, tha board finds that it is not in accordance with stata policy, tha board shall communicate the ordinance's deficiancias in writing to the lead agancy. Upon racaipt of the written communication, tha laad agancy shall have 90 days to submit a ravisad ordinanca to tha board for certlfication as baing in accordanca with state pollcy. The board shall reviaw tha laad agancy's revisad ordinance for certlfication wlthin 60 days of its recaipt. If tha lead agancy doas not submit a ravised ordinanca within 90 days, tha board shall assume full authority for raviawing and approving reclamation plans submittad to tha laad agancy until tha tima tha laad agancy's ordinancas ara revisad in accordance with stata policy.

(b) If, upon raviaw of a laad agancy's revisad ordinance, tha board finds tha ordinanca is still not in accordanca with state policy, the board shall again communicate tha ordinanca's deficiencias in writing to the laad agancy. Tha laad agancy shall hava a second 90-day pariod in which to ravise tha ordinanca and submit it to the board for review. If tha board again finds that tha ravisad ordinance is not in accordanca with stata policy or if no revision is submitted, tha board shall assuma full authority for reviawing and approving raclamation plans submittad to the laad agancy until tha time tha laad agancy's ordinancas are ravisad in accordance with stata policy.

(c) In any jurisdiction in which tha lead agancy doas not have a cartifiad ordinanca, no person shall initlata a surfaca mining oparation unless a raclamation plan has bean submittad to, and approvad by, the board. Any raclamation plan, approvad by a laad agancy undar the lead agancy's ordinanca which was not in accordance with state policy at tha tima of approval, shall be subjact to amandmant by tha board or undar tha ordinanca certifiad by tha board as baing in accordanca with stata policy.

(d) Raclamation plans approvad by tha board pursuant to this saction shall not be subjact to modlfication by tha laad agancy at a future date but may ba amanded by tha board. Raclamation plans approved by the board shall be ramandad to the lead agancy upon cartification of tha lead agancy's ordinance, and tha laad agancy shall approve the raclamation plan as approvad by the board, except that a subsaquent amendmant as may be agread upon batwaan the oparator and tha laad agancy may ba made according to this chapter. No additional public haaring shall ba raquirad prior to the laad agancy's approval. Nothing in this section shall ba construad as authorizing the board to issue a permit for tha conduct of mining oparations.

§ 2774.6. (a) On or bafora March 1, 1995, the dapartmant shall submit to tha Governor and the Lagislature a report, preparad by a qualified consultant, which may include an educational institution, which evaluatas tha affactivanass of laad agancies and the dapartmant in implementing this chaptar and Section 2207, and in maating tha intent of tha Lagislature as set forth in Saction 2712. Tha raport shall be preparad to tha axtant that funds ara appropriatad by the Legislatura for this purposa. Prior to encumbaring any funds for praparation of tha report, the board may conduct a public hearing to racaiva and raspond to public comments concarning tha scopa of issuas to be addressed.

(b) The report shall include, but is not limited to, an evaluation of all of the following:

(1) Compliance with this chapter and Section 2207 by operators of surface mines, lead agencies, the State Geologist, the department, and the board.

(2) Compliance with the reclamation requirements prescribed in Section 2773.

(3) The adequacy of resources needed to carry out this chapter and Section 2207.

(4) The adequacy of information available for purposes of preparing the report.

(5) Any recommended changes to administrative regulations or recommendations for further legislation.

§ 2775. (a) An applicant whose request for a permit to conduct surface mining operations in an area of statewide or regional significance has been denied by a lead agency, or any person who is aggrieved by the granting of a permit to conduct surface mining operations in an area of statewide or regional significance, may, within 15 days of exhausting his rights to appeal in accordance with the procedures of the lead agency, appeal to the board.

(b) The board may, by regulation, establish procedures for declining to hear appeals that it determines raise no substantial issues.

(c) Appeals that the board does not decline to hear shall be scheduled and heard at a public hearing held within the jurisdiction of the lead agency which processed the original application within 30 days of the filing of the appeal, or such longer period as may be mutually agreed upon by the board and the person filing the appeal. In any such action, the board shall not exercise its independent judgment on the evidence but shall only determine whether the decision of the lead agency is supported by substantial evidence in the light of the whole record. If the board determines the decision of the lead agency is not supported by substantial evidence in the light of the whole record it shall remand the appeal to the lead agency and the lead agency shall schedule a public hearing to reconsider its action.

§ 2776. No person who has obtained a vested right to conduct surface mining operations prior to January 1, 1976, shall be required to secure a permit pursuant to this chapter as long as the vested right continues and as long as no substantial changes are made in the operation except in accordance with this chapter. A person shall be deemed to have vested rights if, prior to January 1, 1976, he or she has, in good faith and in reliance upon a permit or other authorization, if the permit or other authorization was required, diligently commenced surface mining operations and incurred substantial liabilities for work and materials necessary therefor. Expenses incurred in obtaining the enactment of an ordinance in relation to a particular operation or the issuance of a permit shall not be deemed liabilities for work or materials.

The reclamation plan required to be filed under subdivision (b) of Section 2770, shall apply to operations conducted after January 1, 1976, or to be conducted.

Nothing in this chapter shall be construed as requiring the filing of a reclamation plan for, or the reclamation of, mined lands on which surface mining operations were conducted prior to January 1, 1976.

§ 2777. Amendments to an approved reclamation plan may be submitted detailing proposed changes from the original plan. Substantial deviations from the original plan shall not be undertaken until such amendment has been filed with, and approved by, the lead agency.

§ 2778. (a) Reclamation plans, reports, applications, and other documents submitted pursuant to this chapter are public records, unless it can be demonstrated to the satisfaction of the lead agency that the release of that information, or part thereof, would reveal production, reserves, or rate of depletion entitled to protection as proprietary information. The lead agency shall identify such proprietary information as a separate part of the application. Proprietary information shall be made available only to the director and to persons authorized in writing by the operator and by the owner.

(b) A copy of all reclamation plans, reports, applications, and other documents submitted pursuant to this chapter shall be furnished to the director by lead agencies on request.

§ 2779. Whenever one operator succeeds to the interest of another in any incompleted surface mining operation by sale, assignment, transfer, conveyance, exchange, or other means, the successor shall be bound by the provisions of the approved reclamation plan and the provisions of this chapter.

Article 6. Areas of Statewide or Regional Significance

§ 2790. After receipt of mineral information from the State Geologist pursuant to subdivision (c) of Section 2761, the board may by regulation

adopted after a public hearing designate specific geographic areas of the state as areas of statewide or regional significance and specify the boundaries thereof. Such designation shall be included as a part of the state policy and shall indicate the reason for which the particular area designated is of significance to the state or region, the adverse effects that might result from premature development of incompatible land uses, the advantages that might be achieved from extraction of the minerals of the area, and the specific goals and policies to protect against the premature incompatible development of the area.

§ 2791. The board shall seek the recommendations of concerned federal, state, and local agencies, educational institutions, civic and public interest organizations, and private organizations and individuals in the identification of areas of statewide and regional significance.

§ 2792. Neither the designation of an area of regional or statewide significance nor the adoption of any regulations for such an area shall in any way limit or modify the rights of any person to complete any development that has been authorized pursuant to Part 2 (commencing with Section 11000) of Division 4 of the Business and Professions Code, pursuant to the Subdivision Map Act (Division 2 [commencing with Section 66410] of Title 7 of the Government Code), or by a building permit or other authorization to commence development, upon which such person relies and has changed his position to his substantial detriment, and, which permit or authorization was issued prior to the designation of such area pursuant to Section 2790. If a developer has by his actions taken in reliance upon prior regulations obtained vested or other legal rights that in law would have prevented a local public agency from changing such regulations in a way adverse to his interests, nothing in this chapter authorizes any governmental agency to abridge those rights.

§ 2793. The board may, by regulation adopted after a public hearing, terminate, partially or wholly, the designation of any area of statewide or regional significance on a finding that the direct involvement of the board is no longer required.

Article 7. Fiscal Provisions

§ 2795. (a) Notwithstanding any other provision of law, the first two million dollars ($2,000,000) of moneys from mining activities on federal lands disbursed by the United States each fiscal year to this state pursuant to Section 35 of the Mineral Lands Leasing Act, as amended (30 U.S.C. Sec. 191), shall be deposited in the Surface Mining and Reclamation Account in the General Fund, which account is hereby created, and may be expended, upon appropriation by the Legislature, for the purposes of this chapter. However, if in any fiscal year, the amount of money disbursed to the state pursuant to Section 35 of the Mineral Lands Leasing Act is less than twenty *million dollars* ($20,000,000), then only the first one million one hundred thousand dollars ($1,100,000) of that money shall be deposited in the Surface Mining and Reclamation Account for the next fiscal year.

(b) Proposed expenditures from the account shall be included in a separate item in the Budget Bill for each fiscal year for consideration by the Legislature. Each appropriation from the account shall be subject to all of the limitations contained in the Budget Act and to all other fiscal procedures prescribed by law with respect to the expenditure of state funds.

§ 2796. (a) The Legislature hereby establishes a state abandoned minerals and mineral materials mine reclamation program for the purpose of administering funds received by the state under the Surface Mining Control and Reclamation Act of 1977, or through amendments to the federal general mining laws (30 U.S.C. Secs. 1, 12A, 16, 161, and 162, and 602, et seq.).

(b) There is hereby created in the State Treasury, the Abandoned Mine Reclamation and Minerals Fund. The money in the fund may be expended, upon appropriation by the Legislature, as required by federal legislation amending the federal general mining laws, and for the following purposes:

(1) Development of an inventory of mined lands, water, and facilities eligible for reclamation.

(2) Establishment by the director of the abandoned minerals and mineral materials mine reclamation program pursuant to the pending federal legislation amending the federal general mining laws, if enacted, that provides for all of the following:

(A) (i) Reclamation and restoration of abandoned surface mined areas.

(ii) For purposes of this subparagraph, "abandoned surface mined area" means mined lands that meet all of the following requirements:

(I) Mining operations have ceased for a period of one year or more.

(II) There is no interim management plan in effect that meets the requirements of Section 2770.

(III) There are no approved financial assurances that are adequate to perform reclamation in accordance with this chapter.

(IV) The mined lands ere adversely affected by past minerel mining, other then mining for coel, oil, end gas, end mineral material mining.

(B) Reclemation and restoration of ebandoned milling and processing areas.

(C) Seeling, filling, and grading ebandoned deep mine entries.

(D) Plenting of land adversely affected by pest mining to prevent erosion end sedimentation.

(E) Prevention, ebatement, treatment, and control of water pollution created by ebandoned mine dreinage.

(F) Control of surface subsidence due to abandoned deep mines.

(G) The expenses necessary to accomplish the purposes of this section.

(3) To the extent those expenditures are allowed by the applicable statutes:

(A) Grants to lead egencies for the purposes of carrying out this chapter.

(B) Implementation of this chapter and Section 2207 by the department, which may include an offsetting reduction in the amount of reporting fees collected from each active and idle mining operation and deposited in the Mine Reclamation Account pursuent to subdivision (d) of the Section 2207, as determined by the director.

(c) The Abandoned Mine Reclemation and Minerels Fund shall be the depository for all moneys from mining activities on federal lands, as follows:

(1) (A) Disbursements made by the United States each fiscal year to this state pursuant to Section 35 of the Mineral Lands Leasing Act (30 U.S.C. Sec. 191), with respect to royalties levied on the production of locatable minerals or mineral concentrates from any mining claim located on federal lends in the state pursuant to the pending federal legislation amending the federal general mining laws, but excluding oil, gas, end geothermel revenues.

(B) The federal funds specified in this peregraph do not include the funds deposited in the Surface Mining and Reclamation Account pursuant to Section 2795, the funds deposited in the Geothermel Resources Development Account pursuant to Section 3820, or the funds deposited in the Stete School Fund pursuent to Section 12320 of the Educetion Code.

(2) Grents made by the Secretary of the Interior to this state from the Abandoned Minerels Mine Reclametion Fund pursuant to the pending federal legisletion amending the federal general mining lews, for the implementation of an abandoned minerals and mining meterials mine reclemetion progrem.

(d) The expenditure of money from the Abandoned Mine Reclametion end Minerals Fund shall reflect the
following priorities and other priorities as specified in federal statute in the following ranking:

(1) The protection of public health end sefety and the environment from the edverse effects of past minerals and mineral materials mining practices.

(2) The protection of property that is in extreme danger as a result of past minerals and mineral materials mining practices.

(3) The restoration of land end water resources previously degreded by the adverse effects of past minerals and mineral materials mining practices.

(e) Proposed expenditures from the Abandoned Mine Reclamation and Minerels Fund shall be included in a separate item in the Budget Bill for eech fiscal yeer for consideration by the Legislature. Each appropriation from the fund shall be subject to all the limitations contained in the Budget Act and to all other fiscal procedures prescribed by law with respect to the expenditure of state funds.

NOTE: Section 2796 shall become operative upon the effective date of any federal legislation which is enacted requiring the payment of e royalty on the production of locatable minerals, produced from any mining cleim located or converted on federel lends in this stete, excluding royalties peid on oil, ges, end geothermal leese activities, end not alreedy subject to disposition under any of the following:

(1) The Mineral Lands Leesing Act
(30 U.S.C. Sec. 191).

(2) The Geothermel Steam Act of 1970
(30 U.S.C. Sec. 100).

(3) The Materials Act of 1947
(30 U.S.C. Sec. 601).

(4) The Minerel Leesing Act for Acquired Lands
(30 U.S.C. Sec. 351).

ANNUAL REPORTING REQUIREMENTS AND REPORTING FEE

Public Resources Code Section 2207
(Repealed and added by AB 3551, Chapter 1097, Statutes of 1990, Shar,
Amanded by AB 3903, Chapter 1101, Statutes of 1990, Sher, AB 1506, Chapter 845,
Statutes of 1991, Sher, AB 3098, Chapter 1077, Statutes of 1992, Sher, and
SB 741, Chapter 1287, Statutes of 1993, Rogers)

§ 2207(a) The owner, lessor, lessee, agent, manager, or other person in charge of any mining operation of whatevar kind or character within the state shall forward to tha director not later than July 1, 1991, and every yaar thereafter not latar than an anniversary data established by tha director, upon forms which will be furnished by the board, a report which identifies all of the following:

(1) The name, address, and telephone numbar of the person, company, or other owner of the mining operation.

(2) The name, address, and telephone number of a designated agent who resides in this state, and who will raceive and accapt sarvice of all orders, notices, and processas of the lead agency, board, director, or court.

(3) The location of the mining operation, its name, its mine number as issued by the Bureau of Mines or the director, its saction, township, range, latitude, longitude, and approximate boundaries of the mining operetion marked on a United States Geological Survay 7½-minute or 15-minute quadrangle map.

(4) The lead agency.

(5) The approval data of the mining operation's reclamation plan.

(6) The mining operation's status as active, idle, reclaimed, or in the process of being reclaimed.

(7) The commodities produced by the mine and the type of mining operation.

(8) Proof of annual inspection by the lead agency, starting with the 1992 report.

(9) Proof of financial assurances.

(10) Ownership of the property, including government agencies, if applicable, by the assessor's parcel number, and total assessed valua of the mining operation.

(11) The approximate permittad size of the mining operation subject to Chapter 9 (commencing with Section 2710), in acras.

(12) The approximate total acreaga of land nawly disturbed by the mining oparation during the previous calendar year.

(13) The approximate total of disturbed acreage reclaimed during the previous calendar year.

(14) The approximate total unreclaimad disturbad acreage remaining as of the end of the calendar year.

(15) The total production for each mineral commodity produced during the previous year.

(16) A copy of any approvad reclamation plan and any amendments or conditions of approval to any existing reclamation plan approved by the lead agency.

(b) Every year, not later than the anniversary date establishad by the director, the person submitting the report pursuant to subdivision (a) shall forward to the lead agency, upon forms which shall be furnished by the board, a report which provides all of the information specified in paragraphs (1) to (14), inclusive, of subdivision (a).

(c) Subsequant reports shall include only changes in the information submitted for the items described in subdivision (a), except that, instead of the approved reclamation plan, the reports shall include any reclamation plan amendments approved during the previous year. The reports shall state whether review of a reclamation plan, financial assurances, or an interim management plan is pending under subdivision (b), (c), (d), or (h) of Section 2770, or whether an appeal before the board or lead agency governing body is pending under subdivision (e) or (h) of Section 2770. The director shall notify the person submitting the report and the owner's designated agent in writing that the report and the fee required pursuant to subdivision (d) have been received, specify the anniversary date by which the mining operation shall submit reports, specify tha mining operation's mine numbar if one has not baen issued by the Bureau of Mines, and notify the person and agant of any deficiancies in the report within 90 days of raceipt. That person or agent shall hava 30 days from receipt of the notification to correct the noted deficiencies and forward the revised reports to the director and the

leed agency. Any person who fells to comply with this section, or knowingly provides Incorrect or felse informetion in reports required by this section, mey be subject to an administrative penalty es provided in subdivision (c) of Section 2774.1.

(d) (1) The boerd shell impose, by regulation, pursuant to peregraph (2), en annuel reporting fee on, end method for collecting ennuel fees from, each active or idle mining operation. The meximum fee for eny single mining operetion shell not exceed two thousend dollers ($2,000) ennually end shall not be less then fifty dollars ($50) ennually.

(2) (A) The boerd shall adopt, by regulation, a schedule of fees authorized under paregraph (1) to cover the department's cost in carrying out this section and Chapter 9 (commencing with Section 2710), es reflected in the Governor's Budget, end mey adopt those reguletions es emergency regulations. In esteblishing the schedule of fees to be paid by eech ective and idle mining operation, the fees shall be calculated on en equitable basis reflecting the size end type of operation. The board shall also consider the total essessed value of the mining operetion, the acreege disturbed by mining activities, and the acreage subject to the reclemetion plan.

(B) Regulations edopted pursuent to this subdivision shall be edopted by the board in accordence with Chepter 3.5 (commencing with Section 11340) of Pert 1 of Divlsion 3 of Title 2 of the Government Code. The edoption of any emergency regulations pursuent to thls subdivlsion shall be considered necessery to address an emergency end shall be considered by the Office of Administrative Law to be necessary for the immediete preservation of the public peece, health, sefety, end generel welfere.

(3) For the 1991-92 fiscal yeer the totel revenue genereted by the reporting fees established pursuant to thls subdivislon shall not exceed, and may be less than, one million one hundred thirty-two thousand dollers ($1,132,000), which shall be adjusted in the 1992-93 and 1993-94 fiscal years to reflect Increases in the cost of living, as measured by the Celifornia Consumer Price Index for all urben consumers, celender year avereges, usIng the percentege change In the previous year. Beglnning in the 1994-95 fiscel year, and for subsequent fiscal years the totel revenue generated by the reporting fees shell not exceed, and may be less than, the emount of one million dollars ($1,000,000), es edjusted for the cost of living beginnIng wIth the 1991-92 fiscal year and annually thereafter. If the director determines that the revenue collected during the preceding fiscal yeer was greeter or less than the cost to operate the program, the board shall adjust the fees to compensate for the overcollection or undercollection of revenues.

(4) The reporting fees established pursuant to this subdivision shall be deposited in the Mine Reclamation Account, which is hereby creeted. Any fees, penalties, interest, fines, or charges collected by the director or board pursuant to this chapter or Chapter 9 (commencing with Section 2710) shall be deposited in the Mine Reclametion Account. The money in the account shall be evailable to the department and board, upon approprietlon by the Legislature, solely to carry out this section and Chapter 9 (commencing with Section 2710), and up to three hundred thousand dollers ($300,000) shall be available to the depertment upon appropriation by the Legislature to contract for preperetion of the report required by Section 2774.6

(5) In case of late payment of the reportIng fee, a penalty of not less then one hundred dollers ($100) or 10 percent of the emount due, whichever is greeter, plus interest et the rate of 1½ percent per month, computed from the delinquent date of the essessment until end Including the date of payment, shall be assessed. New mining operations which heve not submitted a report shall submit a report prior to commencement of operations. The new operation shall submit its fee eccording to the reasonable fee schedule edopted by the board, end the month thet the report is received shall become that operation's enniversary month.

(e) The lead egency may impose e fee upon eech mining operation to cover the reesoneble costs incurred in implementing this chepter end Chepter 9 (commencing with Section 2710) .

(f) For purposes of this section, "mining operetion" has the same meaning as "surfece mining operation" as defined in Section 2735, unless excepted by Section 2714. For the purposes of fee collections only, "mining operation" may include one or more mines opereted by e single operator or mining company on one or more sltes, If the totel annual combined mineral productlon for ell sites is less then 100 troy ounces for precious metals, if precious metals ere the primery mineral commodity produced, or less then 100,000 short tons If the primary mineral commodity produced Is not precious metels.

(g) Any information in reports submitted pursuent to subdivision (a) which includes or otherwise indicates the total mineral production,

reserves, or rate of depletion of any mining operation shall not be disclosed to any member of the public, as defined in subdivision (f) of Section 6252 of the Government Code. Other portions of the reports are public records unless excepted by statute. Statistical bulletins based on these reports and published under Section 2205 shall be compiled to show, for the state as a whole and separately for each lead agency, the total of each mineral produced therein. In order not to disclose the production, reserves, or rate of depletion from any identifiable mining operation, no production figure shall be published or otherwise disclosed unless that figure is the aggregated production of not less than three mining operations. If the production figure for any lead agency would disclose the production, reserves, or rate of depletion of less than three mining operations or otherwise permit the reasonable inference of the production, reserves, or rate of depletion of any identifiable mining operation, that figure shall be combined with the same such figure of not less than two other lead agencies without regard to the location of the lead agencies. The bulletin shall be published annually by June 30 or as soon thereafter as practicable.

SITE INSPECTIONS CONDUCTED BY THE DEPARTMENT OF CONSERVATION

Public Resources Code Section 2208
(Amended by AB 2943 [Allen, Chapter 999, Statutes of 1992])

§ 2208. The director or a qualified assistant may at any time enter or examine any and all mines, quarries, walls, mills, reduction works, refining works, and other mineral properties or working plants in this state in order to gather data to comply with the provisions of this chapter.

PURCHASE AND USE OF MINED MATERIALS BY STATE AGENCIES

Public Contract Code Section 10295.5
(Amended by AB 3098 [Sher, Chapter 1077, Statutes of 1992] and AB 723 [Sher, Chapter 278, Statutes of 1993])

10295.5 (a) Notwithstanding any other provision of law, no state agency shall purchase or utilize sand, gravel, aggregates, or other minerals produced from a surface mining operation subject to the Surface Mining and Reclamation Act of 1975 (Chapter 9 (commencing with Section 2710) of Division 2 of the Public Resources Code), unless the operation is identified in the list published pursuant to subdivision (b) of Section 2717 of the Public Resources Code as having either of the following:

(1) An approved reclamation plan and financial assurances covering the affected surface mining operation.

(2) An appeal pending before the State Mining and Geology Board pursuant to subdivision (e) of Section 2770 of the Public Resources Code with respect to the reclamation plan or financial assurances.

(b) The Department of General Services shall revise its procedures and procurement specifications for state purchases of sand, gravel, aggregates, and other minerals to ensure maximum compliance with this section.

(c) For purposes of the section, "minerals" means any naturally occurring chemical element or compound, or groups of elements and compounds, formed from inorganic processes and organic substances, including, but not limited to, coal, peat, and bituminous rock, but excluding geothermal resources, natural gas, and petroleum.

(d) The requirements of this section shall apply to mining operations on federal lands or Indian lands that are subject to the Surface Mining and Reclamation Act of 1975 (Chapter 9 (commencing with Section 2710) of Division 2 of the Public Resources Code) pursuant to a memorandum of understanding between the Department of Conservation and the federal agency having jurisdiction over the lands.

(e)(1) This section does not apply to construction or maintenance contracts if the contractor has entered into a written subcontract, executed prior to July 1, 1993, for the purchase of materials from a mine operator that would not otherwise qualify under the list published pursuant to subdivision (b) of Section 2717 of the Public Resources Code.

(2) This subdivision shall become inoperative on July 1, 1996.

(f) This section shall become operative on July 1, 1993.

LIABILITY LIMITATIONS FOR REMEDIATION/RECLAMATION OF ABANDONED MINES

See Water Code Section 13397 et seq.
(Added by SB 1108 [Leslie, Chapter 878, Statutes of 1995])

NOTE: While this section amends the California Water Code, liabilities under the federal Clean Water Act may remain until similar federal amendments are adopted.

STATE MINING AND GEOLOGY BOARD RECLAMATION REGULATIONS

Article 1. Surface Mining and Reclamation Practice

§ 3500. Purpose. It is the purpose of this subchapter to establish state policy for the reclamation of mined lands and the conduct of surface mining operations in accord with the general provisions set forth in Public Resources Code, Division 2, Chapter 9, Section 2710 et seq. (Surface Mining and Reclamation Act of 1975, as amended by Statutes of 1980).

Note: Authority cited: Section 2755, Public Resources Code. Reference: Sections 2710-2795, Public Resources Code.

§ 3501. Definitions. The following definitions as used herein shall govern the interpretation of these regulations:

Agricultural Activity. The cultivation and tillage of the soil, dairying, the production, cultivation, growing and harvesting of any agricultural commodity, the raising of livestock or poultry, and any practices performed by a farmer or on a farm as incident to or in conjunction with those farming operations, including preparation of these products for market.

Angle of Repose. The maximum angle of slope (measured from horizontal plane) at which loose cohesionless material will come to rest on a pile of similar material.

Backfill. Earth, overburden, mine waste or imported material used to replace material removed during mining.

Borrow Pits. Excavations created by the surface mining of rock, unconsolidated geologic deposits or soil to provide material (borrow) for fill elsewhere.

Critical Gradient. The maximum stable inclination of an unsupported slope under the most adverse conditions that it will likely experience, as determined by current engineering technology.

Excavations for On-Site Construction. Earth material moving activities that are required to prepare a site for construction of structures, landscaping, or other land improvements (such as excavation, grading, compaction, and the creation of fills and embankments), or that in and of themselves constitute engineered works (such as dams, road cuts, fills, and catchment basins).

Grading. To bring an existing surface to a designed form by cutting, filling, and/or smoothing operations.

Minerals. Any naturally occurring chemical element or compound, or groups of elements and compounds, formed from inorganic processes and organic substances, including, but not limited to, coal, peat, and bituminous rock, but excluding geothermal resources, natural gas, and petroleum.

Person. Any individual, firm, association, corporation, organization, or partnership, or any city, county, district, or the state or any department or agency thereof.

Reclamation Plan. The applicant's (operator's) completed and approved plan for reclaiming the lands affected by his surface mining operations conducted after January 1, 1976, as called for in Section 2772 of the Act.

Resoiling. The process of artificially building or reconstructing a soil profile.

Stream Bed Skimming. Excavation of sand and gravel from stream bed deposits above the mean summer water level or stream bottom, whichever is higher.

Surface Mining Operations. In addition to the provisions of Section 2735 of the Act, borrow pitting, streambed skimming, segregation and stockpiling of mined materials (and recovery of same) are deemed to be surface mining operations unless specifically excluded under Section 2714 of the Act or Section 3505 of these regulations.

Temporarily Deactivated Operation. A surface mine that has been closed down and that the operator has maintained in the expectation of reopening it when the conditions justify.

Topsoil. The upper part of the soil profile that is relatively rich in humus, which is technically known as the A-horizon of the soil profile.

NOTE: Authority cited: Section 2755, Public Resources Code. Reference: Sections 2726-2735, Public Resources Code.

§ 3502. The Reclamation Plan.

(a) Objectives. Reclamation plans shall be developed to attain the objectives of Public Resources Code Section 2712(a)-(c).

(b) Reclamation Plan Elements. In addition to the information required by Public Resources Code

Section 2772, the following elements shall be included in the reclamation plan:

(1) The environmentel setting of the site of operations end the effect that possible alternate reclaimed site conditions may have upon the existing and future uses of surrounding lands.

(2) The public health and safety, giving consideration to the degree and type of present and probable future exposure of the public to the site.

(3) The designed steepness and proposed treatment of the mined lands' final slopes shall take into consideration the physicel properties of the slope materiel, its probable maximum water content, landscaping requirements, end other factors. In all cases, reclamation plans shall specify slope angles flatter than the critical gradient for the type of material involved. Whenever final slopes approach the critical gradient for the type of material involved, regulatory egencies shall require an engineering analysis of the slope stability. Special emphasis on slope stability and design shall be necessary when public safety or adjecent property may be affected.

(4) Arees mined to produce edditionel materials for backfilling and grading, es well es settlement of filled areas, shall be considered in the reclametion plan. Where ultimate site uses include roads, building sites, or other improvements sensitive to settlement, the reclamation plans shall include compaction of the fill meterials in conformance with good engineering practice.

(5) Disposition of old equipment.

(6) Temporery streem or wetershed diversions.

(c) Adequacy. In judging the edequacy of e particuler reclametion plen in meeting the requirements described herein and within the Act, the leed egency shall consider the physlcal and lend-use charecteristics of the mined lends end their surrounding area pursuant to Public Resources Code Section 2773.

NOTE: Authority cited: Section 2755, Public Resources Code. Reference: Sections 2712(e)-(c), 2756-2757, 2770 end 2772-2773, Public Resources Code.

§ 3503. Surfece Mining end Reclamation Practice.

The following ere minimum ecceptable prectices to be followed in surface mining operations:

(a) Soil Erosion Control.

(1) The removal of vegetetion and overburden, if eny, in edvence of surface mining shall be kept to the minimum.

(2) Stockpiles of overburden end minerals shall be maneged to minimize weter and wind erosion.

(3) Erosion control facilities such es retardin besins, ditches, streambank stebilization, and diking shell be constructed end maintained where necessary to control erosion.

(b) Water Quelity and Wetershed Control.

(1) Settling ponds or basins shall be constructed to prevent potential sedimentation of streams et operations where they will provide e significant benefit to water quality.

(2) Operations shall be conducted to substentially prevent siltation of ground-water recharge arees.

(c) Protection of Fish end Wildlife Habitet. All reasonable measures shall be taken to protect the habitat of fish and wildlife.

(d) Disposal of Mine Weste Rock and Overburden. Permanent piles or dumps of mine weste rock end overburden shall be stable end shell not restrict the natural dreinage without suitable provisions for diversion.

(e) Erosion and Drainage. Grading end revegetation shall be designed to minimize erosion end to convey surfece runoff to netural dreinage courses or interior besins designed for weter storage. Basins that will store weter during periods of surface runoff shall be designed to preven erosion of spillways when these basins have outlet to lower ground.

(f) Resoiling. When the reclamation plen cells for resoiling, coerse hard mine waste shall be leveled end covered with a leyer of finer material or weathered weste. A soil leyer shell then be pleced on this prepered surfece. Surfece mines thet did not salvage soil during their initial operetions shell ettempt, where feesible, to upgrade remaining meteriels. The use of soil conditioners, mulches, or imported topsoil shell be considered where revegetation is part of the reclemetion plen end where such meesures eppeer necessary. It is not justified, however, to denude edjecent erees of their soil, for any such denuded areas must in turn be recleimed.

(g) Revegetation. When the reclemetion plan cells for revegetation the eveileble reseerch eddressing revegetation methods end the selection of species heving good survivel cheracteristics, for the topogrephy, resoiling cherecteristics, end climete of the mined arees shall be used.

NOTE: Authority cited: Section 2755, Public Resources Code. Reference: Sections 2756 end 2757, Public Resources Code.

§ 3504. Administration by Lead Agency.

(a) Record Keeping. The lead agancy shall establish and maintain inhouse measures and procedures to ensure organized record-keaping and monitoring of surface mining reclamation under its jurisdiction. Tha lead agency shall forward a copy of each permit and approved reclamation plan to tha California Division of Mines and Geology (Sacramento).

(b) Performance Assurances. The lead agency shall ensure that the objectives of the reclamation plan will be attainad. This may include provisions for liens, surety bonds or other security, to guarantee the reclamation in accordance with tha approved reclamation plan.

NOTE: Authority cited: Section 2755, Public Resources Code. Referenca: Sections 2757, 2758(b), 2774(a) and 2778, Public Resourcas Coda.

§ 3505. Special Provisions.

(a) Exemptions.

(1) In addition to the provisions of Public Resourcas Code Section 2714(a), (c) and (d), any surface mining operation that does not involve either the removal of a total of more than 1000 cubic yards of minarals, ores, and overburden, or involve more than ona acre in any one location, shall be exampt from tha provisions of tha Act.

(2) The purpose of this subdivision is to define tha criteria of a "flood control facility," the clean out of which is exempt from tha requirements of the Surface Mining and Reclamation Act of 1975 under PRC 2714(a) and (b). It is intendad that cleaning out of a praviously engineered, constructed facility for which approved design plans exist is an activity to restore tha usafulness of that flood control facility to its original design purpose. It is not the intent of this subsection to exempt the removal of materials from natural channals.

The removal of post construction accumulatad materials from a responsible public agency approved, managad, enginaared, constructad facility intended for tha purpose of water retention or detention, debris retantion, or from a flood watar convayance, whare tha post extraction condition, capacity or grade of the facility or conveyance does not exceed the as-built approved design specification containad in the approved documents for the facility or conveyance, shall be exempt from the provisions of the Act.

(3) The excavation, grading, or transportation of mineral materials, including overburden, exclusive of commercial surface mining activities as defined in Public Resources Code Section 2714(d), that is wholly integral and necessary to the conduct of agricultural activities either onsite or on non-contiguous parcels, shall meet the requirements of Public Resources Code Section 2714(a) for farming excavations or grading. This exemption doas not apply to tha exportation of mineral materials, including overburden, from the proparty that is in excess of 1,000 cubic yards for commercial purposes.

(b) Vested Rights. The permit and reclamation plan requirements for parsons with vested rights are stated in Public Resources Code Saction 2776.

Where a person with vested rights continues surfaca mining in the sama area subsequent to January 1, 1976, he shall obtain an approval of a reclamation plan covering tha mined lands disturbed by such subsequent surface mining. In those cases where an overlap exists (in the horizontal and/or vertical sense) between pre- and post-Act mining, tha reclamation plan shall call for reclamation proportional to that disturbance caused by the mining after the effective date of the Act.

NOTE: Authority citad: Sactions 2714(d) and 2755, Public Resources Code. Raference: Sections 2714, 2758(c) and 2776, Public Resources Code.

Article 6. Mineral Resource Management Policies

§ 3675. Definitions. The following definitions as usad herein shall govern the intarpretation of thesa regulations:

Compatible Land Usa. Land uses inherently compatible with mining and/or that require a minimum public or private investment in structures, land improvements, and which may allow mining becausa of the ralativa economic value of tha land and its improvements. Examples of such uses may include, but shall not be limited to, very low density residantial, geographically extensive but low impact industrial, recreational, agricultural, silvicultural, grazing, and open spaca.

Incompatible Land Usa. Land uses inherently incompatible with mining and/or that require public or private investment in structures, land improvements, and landscaping and that may prevent mining because of tha greater economic value of the land and its improvements. Examples of such uses may include, but shall not be limited to, high dansity residential, low density residential with high unit value, public facilities, geographically limited but impact intensive industrial, and commercial.

NOTE: Authority cited: Section 2755, Public Resources Code. Reference: Sections 2761-2762, Public Resources Code.

§ 3676. Mineral Resource Management Policies.

Lead egency minerel resource menagement policies edopted pursuant to the provisions of PRC Section 2762 shall include but not be limited to, the following:

(a) A summery of the informetion provided by the classificetion end/or designetion reports, or incorporation of PRC Sections 2710 et seq., and stete policy by reference, together with maps of the identified mineral deposits or incorporation by reference of the classificetion end/or designation meps provided by the Boerd.

(b) Stetements of policy in eccordance with the provisions of PRC Section 2762(e).

(c) Implementation meesures that shall include:

(1) Reference in the general plen of the location of identified mineral deposits, and a discussion of those areas targeted for conservation and possible future extraction by the lead agency.

(2) Use of overlay maps or inclusion of informetion on eny appropriate planning meps to clearly delineete identified mineral deposits and those arees targeted by the leed egency for conservetion and possible future extraction.

(3) At least one of the following:

(A) Use of speciel purpose overlay zones, minerel resource/open spece zoning, or any other appropriate zoning thet identifies the presence of identified mineral deposits and restricts the encroechment of incompetible land uses in those areas that are to be conserved.

(B) Record, on property titles in the effected mineral resource arees, a notice identifying the presence of identified minerel deposits.

(C) Impose conditions upon incompetible lend uses in and surrounding erees conteining identified mineral deposits for the purpose of mitigating the significant land use conflicts prior to approving e use that would otherwise be incompetible with mineral extrection.

NOTE: Authority cited: Section 2755, Public Resources Code. Reference: Sections 2757 end 2761-63, Public Resources Code.

Article 8. Fee Schedule

§ 3695. Definitions.

The following definitions shall govern the interpretation of these reguletions:

"Produced Minerals" means minerals extracted et the site of the mining operetion, end either:

(a) sold, given or otherwise moved off the site of the operetion, es defined in the epprovec reclemetion plen, or;

(b) used onsite for production of completed products (e.g. cement, bricks, espheltic concrete, etc.).

Stockpiles of mineral products that remein on the site, es defined in the leed egency approved reclametion plan, are not produced minerals for purposes of these regulations.

"Primery Minerel Commodity Produced" means the produced mineral that provides the highest dollar velues sales for the operation.

"Board" means State Mining end Geology Board.

As used in Section 3697 end 3699 "Mining Compeny" means any entity, corporetion, partnership, parent or holding company. Any subsidieries of the above are deemed to be pert of the mining company.

As used in Section 3699, "Gross Income" meens all income from whatever source derived as defined by, and determined in accordence with, Section 61 of the Internal Revenue Code, Title 26, U.S.C.S.

"Aggregete Products" meens decomposed granite, send end gravel, slag, or stone.

"Industriel Minerals" meens borates, cinders, cley, dietomite, dolomite, gypsum, iron ore, lime, limestone, perlite, pumice, rere earth elements, seline compounds, salt, shale, silica, specielty send, ebresives, esbestos, berite, bituminous rock, decorative rock, dimension stone, feldspar, fluorite, gemstones, grephite, kyenite, lignite, lithium, megnesite, mice, olivine, peet, phosphate, potash, pyrophyllite, quartz crystel, sea shells, sercite, talc, vermiculite, wollastonite, zeolites, end zircon.

"Gold, Silver, and Precious Metals" meens gold (lode), gold (placer), pletinum group metels, and silver.

"Base Metals and Other Metals" means antimony, arsenic, chromite, copper, lead, mangtanese, mercury, molybdenum, nickel, pyrite, tin, titenium, tungsten, urenium, vanedium, end zinc.

NOTE: Authority cited: Sections 2207(d)(1)-(2), Public Resources Code. Reference: Sections 2207 (d)(1)-(2) end 2207(f), Public Resources Code.

§ 3696. Operations Subject to Fees.

(e) Eech surfece mining operation, es defined in Public Resources Code Sections 2719, 2727.1, 2735, and California Code of Regulations, Title 14, Section 3501, unless exempted by Public Resources Code Section 2714, shall be assessed en annual reporting fee eccording to the schedule established

pursuent to in Section 3698 eech Mey 1 following the reporting celender yeer.

(b) In eddition to the annuel reporting fee, eech surfece mining operetion that is newly permitted shell be essessed en initiei reporting fee eccording to the schedule in Section 3698 of this erticle.

NOTE: Authority cited: Section 2207, Public Resources Code. Reference: Section 2207, Publiic Resources Code.

§ 3697. Fees Due and Delinquent.

(a) The ennuel reporting fee end Mining Operation Annuei Report (MRRC-2) are due end peyeble to the Depertment of Conservetion not leter then July 1 for the prior reporting yeer, by the owner or operetor of record on the preceding December 31. The initiel reporting fee for e new surface mining operation, together with en initiel report, ere due end peyable to the Depertment of Conservetion not leter than thirty (30) days after permit epprovel. An owner or operator of e surfece mining operation submitting an ennuel reporting fee or ennual report efter July 1, or more then thirty (30) deys efter permit approvel, shell be assessed e penelty fee end interest as provided in Public Resources Code Section 2207 (c) and (d)(5).

(b) Except es otherwise provided in (c), for the purposes of this erticle, surfece mining operetions ere deemed to be discrete operations per eech reclemetion plan required.

(c) Multiple site surfece mining operetions ere deemed to be those ective surfece mining operetions which meet eli of the following criterie:

(1) One or more surfece mining operetions ere opereted on one or more sites by e single operetor or mining company;

(2) The totel ennuel combined minerel production for ell sites is less then 100 troy ounces for precious metels, if precious metals ere the primery minerel commodity produced, or less than 100,000 short tons if the primary minerel commodity product is not precious metels;

(3) Ail of the sites included are active;

(4) All of the operator or compeny's entire active surfece mining operetions loceted in the Stete of Celifornie ere tied to, or located on, the listed sites; end

(d) In eddition to the criterie provided in (c), multiple site mining operator's submittal of the ennual report form (Mining Operetion Annuel Report, Form MRRC-2) shell be accompanied by a multiple site form (Multiple Site Single Fee Request, Form MRRC-4M) supplied by the Depertment of Conservation.

NOTE: Authority cited: Section 2207, Public Resources Code. Reference: Section 2207, Public Resources Code.

§ 3698. Fees Calculation.

(e) The ennuel reporting fee for e multiple site surface mining operation shall be two thousend dollars ($2000).

(b) The annuel reporting fee for surfece mining operetions which are no longer in operetion with no intent to resume, which had no minerel production in the reporting celender year, and

(1) Which did not complete reclemetion during the reporting celendar year shall be $50; or

(2) Which completed reclemation during the reporting celendar year shall be $50. Proof of completion of reclemation, approved by the lead egency, shell be submitted with this fee.

(c) Except as otherwise provided, the ennual reporting fee for surface mining operations shell be calculeted on the total primary mineral commodity produced in the reporting celendar year. A factor to determine the emount of fee adjustments shell be ceiculeted eccording to the following formule:

$$[((ATRY) - (ATPY))/(ATPY)] = Fector$$

Where: Adjusted Total (AT) equels the Amount Requested by the Director, less a projected emount from fixed fees set in CCR §3698 (a)(b)(d)(e) and CCR §3699, end less a projected emount from mine operetions subject to the meximum fee emount of $2,000;

Where: ATRY is the Adjusted Totel for the current "Reporting Yeer"

Where: ATPY is the Adjusted Totel for the "Prior Yeer"

The new Fee Amount for each cetegory is determined by the following formula (calculated amounts cennot be less than $50 or more than $2,000, and may be rounded to the nearest $5 (five dollers):

Formule 1: Current Year Reporting Fee = Prior Yeer Reporting Fee times (1 + Fector) if Fector is positive;

Formule 2: Current Year Reporting Fee = Prior Yeer Reporting Fee times (1 - Factor) if Fector is negetive.

(1) Operations where the primary mineral commodity produced is either aggregete products or industrial minerals shell be essessed e fee as foliows:

Tons	Fee in Dollers
0 - 100	Formule 1 or 2 (not less then $50)
>100 - 1,000	Formule 1 or 2
>1,000 - 10,000	Formule 1 or 2
>10,000 - 50,000	Formule 1 or 2
>50,000 - 100,000	Formule 1 or 2
>100,000	2,000

(2) Operations where the primery mineral commodity produced is gold, silver, or precious metals shell be assessed e fee es follows:

Ounces	Fee in Dollers
0 - 1	Formule 1 or 2 (not less then $50)
> 1 - 10	Formule 1 or 2
>10 - 50	Formula 1 or 2
>50 - 150	Formula 1 or 2
>150 - 300	Formule 1 or 2
>300	2,000

(3) Operations where the primery mineral commodity produced is base metals or other metels shall be assessed e fee es follows:

Pounds	Fee in Dollars
0 - 10	Formule 1 or 2 (not less then $50)
>10 - 100	Formule 1 or 2
>100 - 1,000	Formule 1 or 2
>1,000 - 10,000	Formule 1 or 2
>10,000 - 20,000	Formule 1 or 2
>20,000	2,000

(d) The initiel reporting fee for surfece mining operetions shall be five hundred dollers ($500).

(e) The ennuel reporting fee for newly permitted surface mining operetions which heve not yet begun operations shell be fifty dollars ($50).

NOTE: Authority cited: Section 2207, Public Resources Code. Reference: Section 2207, Public Resources Code.

§ 3699. Low Gross Exemptions.

(e) For the calendar reporting yeer, e single operator or mining compeny mey file with the Office of Mine Reclemetion of the Department of Conservetion, e written request for an exemption from the method of fee essessment set forth in Section 3698. Neither the State, nor eny county, city, district or other politicel subdivision shell be eligible for an exemption under this Section. A request for en exemption must be filed on e form (Low Gross Exemption Fee Request, Form MRRC-4L) supplied by the Department of Conservation end received by the Department of Conservetion by July 1 following the calender reporting yeer. The Department of Conservation shell grent the exemption if information submitted end confirmed b the annual report form and epproved reclamation plan or plens, clearly demonstrates that the operation meets the following criteria:

(1) meteriel is extracted from one surface mining operation, end leed egency approvel of a reclemetion plen and finencial assurance has been obtained; end

(2) all of the single operator or mining company's surfece mining operetion located in the Stete of Californie is tied to, or loceted on, one site; end

(3) the emount of the operator's gross income from the surface mining operation for the reporting celender yeer was less than $100,000, end proof of gross income is supplied in the form of e signed federel tax return or returns eccompanied by a completed end signed Federel Internal Revenue Service Form 4506, or e report prepared end signed by a certified public eccountant; and

(4) the owner or operator has submitted an annual reporting fee of two hundred dollars ($200).

(b) For eny request received on or before July 1 following the reporting calendar year the Department may afford the epplicent one 30-day period in which to correct minor deficiencies in the epplicetion.

(c) If the Department of Conservetion determines thet en exemption is not warranted, the opereto mey eppeel thet determinetion to the Boerd. The eppeel must be submitted in writing within fifteen (15) deys of the denlel of exemption notification by the Department of Conservation. The Chairmen of the Boerd or his designee (Boerd Member), shall determine whether the Boerd has jurisdiction for the purposes of en eppeel. In order for the Boerd to heve jurisdiction the eppeel must:

(1) Demonstrete the exemption request was complete end filed in a timely fashion;

(2) Specificelly relate to the exemption criterie outlined in this Section; and

(3) Specify the eppellent's arguments for granting the exemption.

(d) If the eppeal is within the Boerd's jurisdiction, the Boerd, besed on ell the evidence in the record, mey effirm the Department's decision or grent the exemption. If the operetor does not appeel, the eppeel is not within the Board's jurisdiction, or the Board effirms the Department's decision, the operetor or owner shell submit en ennuel reporting fee calculeted upon the totel minerel commodity produced pursuent to Section 3698. Such fee shall be submitted within thirty (30) days of notificetion by the Department of Conservation or the Board. A operator or owner submitting en annuel reporting fee

later than thirty (30) days after notification shall be assessed a penalty and interest as provided in Public Resources Code Section 2207(d)(5).
NOTE: Authority cited: Section 2207, Public Resources Code. Reference: Section 2207, Public Resources Code.

Article 9. Reclamation Standards

§ 3700. Applicability. Reclamation of mined lands shall be implemented in conformance with the standards in this Article.

(a) The standards shall apply to each surface mining operation to the extent that:

(1) they are consistent with required mitigation identified in conformance with the California Environmental Quality Act, provided that such mitigation is at least as stringent as the standards; and

(2) they are consistent with the planned or actual subsequent use or uses of the mining site.

(b) Where an applicant demonstrates to the satisfaction of the lead agency that an exception to the standards specified in this article is necessary based upon the approved end use, the lead agency may approve a different standard for inclusion in the approved reclamation plan. Where the lead agency allows such an exception, the approved reclamation plan shall specify verifiable, site-specific standards for reclamation. The lead agency may set standards which are more stringent than the standards set forth in this Article; however, in no case may the lead agency approve a reclamation plan which sets any standard which is less stringent than the comparable standard specified in this Article.

(c) When substantial amendments are proposed to reclamation plans which were approved prior to January 15, 1993, the standards set forth in this Article shall be applied by the lead agency in approving or denying approval of the amended reclamation plan.

(d) The standards in this Article shall not apply to mining operations:

(1) which completed reclamation prior to January 15, 1993, in conformance with an approved reclamation plan; or

(2) for which a reclamation plan has been approved prior to January 15, 1993.
NOTE: Authority cited: Sections 2755, 2756 and 2773, Public Resources Code. Reference: Section 2773, Public Resources Code.

§ 3701. Definitions. The following definitions shall govern the interpretation of these regulations:

"Arid" means landscapes with an average annual precipitation of five inches or less.

"Contamination" means an impairment of the quality of the waters of the state to a degree which creates a hazard to the public health through poisoning or through the spread of disease.

"Highwall" means the unexcavated face of exposed overburden and ore in a surface mine.

"Indigenous Plants" means plants occurring naturally in an area, not introduced.

"Native Species" means plant species indigenous to California, using pre-European as the historic time reference.

"Noxious Weeds" means any species of plant that is or is likely to become destructive or difficult to control or eradicate, and is termed to be so by the Director of the Department of Food and Agriculture in section 4500, Title 3 of the California Code of Regulations, pursuant to the Food and Agriculture Code section 5004 et seq.

"Vegetative Cover" means the vertical projection of the crown or shoot area of a species to the ground surface expressed as a percentage of the reference area (percentage can be greater than 100 percent).

"Vegetative Density" means the number of individuals or stems of each species rooted within the given reference area.

"Vegetative Species-richness" means the number of different plant species within the given reference area.

"Wetlands" for the purposes of these regulations, the definition of wetlands shall be the same as defined in the California Fish and Game Code, section 2785, subdivision (g).
NOTE: Authority cited: Sections 2755, 2756 and 2773, Public Resources Code. Reference: Section 2773, Public Resources Code.

§ 3702. Financial Assurances. Lead agencies shall require financial assurances for reclamation in accordance with Public Resources Code section 2773.1 to ensure that reclamation is performed in accordance with the approved reclamation plan and with this article.
NOTE: Authority cited: Sections 2755, 2773 and 2773.1, Public Resources Code. Reference: Sections 2773 and 2773.1, Public Resources Code.

§ 3703. Performance Standards for Wildlife Habitat.

Wildlife and wildlife habitat shall be protected in accordance with the following standards:

(a) Rare, threatened or endangered species as listed by the California Department of Fish and Game, (California Code of Regulations, Title 14,

sections 670.2 - 670.5) or the U. S. Fish and Wildlife Service, (50 CFR 17.11 end 17.12) or species of speciel concern es listad by the California Depertment of Fish and Geme in the Speciel Animels List, Natural Diversity Deta Bese, and their respectiva habitet, shell be conserved es prescribed by the federal Endangered Species Act of 1973, 16 U.S.C. section 1531 et. seq., end the California Endangered Species Act, Fish and Geme Code section 2050 et seq. If evoidence cannot be achieved through the eveileble elternativas, mitigation shall be proposad in accordenca with the provisions of the California Endangered Specias Act, Fish and Geme Code section 2050 et seq., end the federel Endangered Species Act of 1973, 16 U.S.C. section 1531 at seq.

(b) Wildlife hebitat shall be established on disturbed land in e condition at least as good as that which existed before the lands wara disturbed by surface mining operations, unless the proposed end use precludes its use as wildlife habitet or the approved reclamation plan establishes a different habitat type than that which existed prior to mining.

(c) Wetland habitet shall be evoided. Any wetland habitat impacted es e consequence of surface mining operations shall be mitigetad at e minimum of ona to ona ratio for watlend habitat acreage end wetlend habitat value.

NOTE: Authority citad: Sections 2755, 2756 end 2773, Public Rasources Code. Referenca: Section 2773, Public Resources Coda.

§ 3704. Parformence Standards for Backfilling, Ragrading, Slope Stability, and Racontouring. Backfilling, regreding, slopa stebilizetion, end racontouring shall conform with the following standards:

(e) Where backfilling is proposed for urban uses (e.g., roads, buildlng sites, or other improvements sensitiva to settlement), tha fill meteriel shall be compectad in accordenca with section 7010, Chapter 70 of tha Uniform Building Coda, published by the Intarnationel Confarence of Building Officiels (1991), tha locel grading ordinenca, or other methods eppraved by tha laad agency as appropriate for the approved end use.

(b) Where beckfilling is required for resource conservetion purposes (e.g., agriculture, fish and wildlife habitat, and wildlend conservetion), fill materiel shall be beckfillad to the stenderds requirad for the resourca conservetion usa involvad.

(c) Piles or dumps of mining waste shell ba stockpiled in such a menner es to facilitate phased reclamation. They shell be segregeted from topsoil end topsoil substitutes or growth media selvagad for use in reclametion.

(d) Finel reclaimed fill slopes, including permanent piles or dumps of mine waste rock end overburden, shall not exceed 2:1 (horizontal:vertical), except when site-specific geologic end engineering anelysis demonstrete that the proposed finel slope will have e minimum slope stebility fector of safaty thet is suitable for the proposed and use, and when the proposed final slope cen be successfully revagatated.

(e) At closure, all fill slopes, including permanent piles or dumps of mine waste and overburden, shell conform with the surrounding topography and/or eppraved end use.

(f) Cut slopes, including finel highwalls and quarry fecas, shall heva a minimum slope stebility factor of sefety thet is suitable for the proposed end use end conform with tha surrounding topogrephy end/or approved end use.

(g) Permanent placament of piles or dumps of mining wasta and ovarburdan shall not occur within wetlands unlass mitigation accaptable to the leed egency has bean proposed to offset wetland impects end/or losses.

NOTE: Authority cited: Sactions 2755, 2756 and 2773, Public Resources Code. Refarence: Sectior 2773, Public Resources Code.

§ 3705. Performance Standards for Revagatation.

Ravegetation shell be part of the approved plan, unlass it is not consistent with tha eppraved end use.

(a) A vagetativa cover suiteble for the proposed and use end cepebla of salf-reganaration without continued depandence on irrigation, soil emendments or fertillzer shall be esteblished on disturbed lend unlass an artificially meintelned landscepe is consistent with the eppraved reclamation plen. Vagatativa cover or dansity, and species-richness shall be, whare appropriata, sufficient to stabilize the surfece against affacts of long-term erosion end shall be simller to neturelly occurring habitets in the surrounding araa. The vegatative dansity, covar and species richness of neturelly occurring habitats shell be documented in beseline studies cerried out prior to the initiation of mining activities. However, for araes thet will not be recleimed to prior conditions, the use of deta from reference ereas in lieu of basaline site data is permissible.

(b) Test plots conducted simulteneously with mining shall ba required to datermine the mos eppropriata plenting procedures to be followed tc

ensure successful implementetion of the proposed revegetation plen. The lead agency mey waive the requirement to conduct test plots when the success of the proposed revegetation plen cen be documented from experience with similar species and conditions or by relying on competent professionel edvice based on experience with the species to be plented.

(c) Where surfece mining activities result in compection of the soil, ripping, disking, or other meens shall be used in erees to be revegetated to eliminate compection end to establish e suitable root zone in preparation for planting.

(d) Prior to closure, all access roads, haul roads, and other traffic routes to be recleimed shell be stripped of any remeining roedbese materiels, prepered in accordance with subsection 3705(g), covered with suiteble growth media or topsoil, end revegeteted. When it is not necessery to remove roedbase meteriels for revegetetive purposes, leed egencies may set a different stenderd es specified in section 3700(b) of this Article.

(e) Soil enelysis shell be required to determine the presence or ebsence of elements essential for plent growth end to determine those soluble elements thet mey be toxic to plants, if the soil hes been chemicelly eltered or if the growth media consists of other than the netive topsoil. If soil enelysis suggests that fertility levels or soil constituents are inadequete to successfully implement the revegetative program, fertilizer or other soil emendments may be incorporated into the soil. When netive plant meterials ere used, preference shell be given to slow-release fertilizers, including minerel end orgenic materials thet mimic neturel sources, end shell be edded in amounts similar to those found in reference soils under neturel vegetation of the type being reclaimed.

(f) Temporary eccess for exploretion or other short-term uses on arid lends shall not disrupt the soil surfece except where necessary to gein sefe eccess. Berriers shell be installed when necessary to gain sefe access. Berriers shall be instelled when necessery to prevent uneuthorized vehiculer treffic from interfering with the reclemetion of temporery access routes.

(g) Native plent species shell be used for revegetation, except when introduced species ere necessery to meet the end uses specified in the approved reclemetion plen. Arees to be developed for industriel, commerciel, or residential use shell be revegetated for the interim period, as necessary, to control erosion. In this circumstance, non-netive plent species mey be used if they are not noxious weeds end if they are species known not to displece netive species in the area.

(h) Planting shall be conducted during the most favoreble period of the year for plent esteblishment.

(i) Soil stebilizing practices shall be used where necessary to control erosion and for successful plent esteblishment. Irrigation may be used when necessery to establish vegetetion.

(j) If irrigetion is used, the operetor must demonstrete that the vegetation has been self-sustainIng without irrigation for a minimum of two years prior to release of the financiel essurances by the leed egency, unless an ertificially meintained landscape is consistent with the approved end use.

(k) Noxious weeds shell be maneged: (1) when they threaten the success of the proposed revegetation; (2) to prevent spreading to neerby erees; end (3) to eliminate fire hazard.

(l) Protection measures, such es fencing of revegetated ereas end/or the plecement of cages over individual plents, shall be used in erees where grezing, trempling, herbivory, or other ceuses threeten the success of the proposed revegetation. Fencing shell be mainteined until revegetetion efforts are successfully completed and the lead egency euthorizes removel.

(m) Success of revegetetion shell be judged besed upon the effectiveness of the vegetetion for the approved end use, end by comparing the quentified measures of vegetative cover, density, end species-richness of the reclaimed mined-lends to simllar parameters of naturally occurring vegetetion in the eree. Either baseline date or deta from nearby reference ereas may be used as the standard for comperison. Quantitative standards for success end the locetion(s) of the reference area(s) shell be set forth in the epproved reclemetion plan. Comperisons shell be made until performence standerds ere met provided thet, during the lest two yeers, there hes been no humen intervention, including, for exemple, irrigatlon, fertilization, or weeding. Stendards for success shall be besed on expected locel recovery retes. Velid sampling techniques for meesuring success shall be specified in the approved reclemation plen. Semple sizes must be sufficient to produce at leest en 80 percent confidence level. There ere standerd stetistical methods in commonly eveilable literature for determining en 80 percent confidence level on a site-by-site basis. Exemples of such literature include, but are not limited to, D. Mueller-Dombois end H. Ellenberg, 1974, "Aims end Methods of Vegetetion Ecology", John Wiley and Sons, Inc., or C. D. Bonham, 1988, "Meesurements for Terrestriel Vegetetion", John Wiley end Sons,

Inc., end ere evailabla at many universlty librarias. The texts ere elso available et some locei libreries through tha Intar-Library Loen Progrem.
NOTE: Authority cited: Sections 2755, 2756 and 2773, Public Resources Code. Reference: Saction 2773, Public Resources Code.

§ 3706. Performance Standards for Drainage, Diversion Structures, Waterways, and Erosion Control.

(a) Surface mining and reclemetion ectivities sheil be conducted to protect on-site and downstreem beneficiei uses of water in accordence with the Porter-Cologna Wetar Quality Control Act, Weter Code section 13000, et seq., and the Fadaral Clean Weter Act, 33 U.S.C. saction 1251, at seq.

(b) The quelity of water, recharga potential, and storege capacity of ground weter aquifers whlch are the source of weter for domestic, egricultural, or other uses dependent on the water, shall not be diminished, except es ellowed in the approved raclemation plan.

(c) Erosion end sedimantetion shall be controlled during aii phases of construction, oparetion, raclametion, end closure of e surface mining operation to minimize siitation of lakes and wetercourses, as required by the Reglonei Wetar Quelity Control Board or the Stete Water Resources Controi Boerd.

(d) Surface runoff and drainege from surface mining ectivities shell be controlled by berms, silt fencas, sediment ponds, ravegatation, hey beles, or other erosion control meesures, to ensura thet surrounding land and water resources ere protectad from erosion, gullying, sedlmentation end contemlnation. Erosion control methods shell be designed to handle runoff from not less than the 20 yeer/l hour intensity storm event.

(e) Where natural dreineges are covered, restricted, rerouted, or otherwise lmpected by surface mining activitias, mitigating alternatives shell be proposed and specificeliy approved in the reclamation plan to assure that runoff sheli not ceuse lncreesed erosion or sedimentation.

(f) When stream diversions are required, they shell be constructad in accordence with:

(1) the stream end leke alteretion egreement between the operetor end the Dapertment of Fish end Geme; end

(2) the requirements of the Federel Claan Weter Act, Sections 301 (33 U.S.C. 1311) end Section 404 (33 U.S.C. 1344) end/or Section 10 of the Rivers end Herbors Act of 1899 (33 U.S.C. 403).

(g) Whan no longar naaded to achiava the purpose for which they were euthorized, all tamporary straem chennal divarsions shall b removad end the affected lend raclaimad.
NOTE: Authority cited: Sections 2755, 2756 end 2773, Public Rasourcas Code. Refarenca: Saction 2773, Public Rasourcas Coda.

§ 3707. Parformenca Stendards for Prime Agricultural Lend Reclamation. In eddition to the standerds for topsoii salvege, maintanance, end redistribution, the following standards shall apply to mining operetions on prime agriculturai lands where tha approvad end use is egriculture:

(a) Mining operations which wiii operate on prime agricultural lands, es definad by the U.S. Soil Conservetion Servlce, shell return all disturbed ereas to e fertility levei es specified in the eppraved reclametion plan.

(b) When distinct soii horizons are present, topsoii shall be salvaged and segregeted by defined A, B, and C soil horizons. Upon reconstruction of the soil, tha sequence of horizons shall have the A atop the B, the B atop the C, end the C etop graded overburden.

(c) Reclamation shall be deamad complete when productiva cepebiiity of the effected iand is aquivelent to or exceeds, for two consacutive crop yeers, that of the premining condition or simiier crop production in the aree. Productivity rates, based or referance erees described in tha eppraved reclamation pien, shell be specified in the eppraved reclemation plen.

(d) Use of fertilizers or other soil amandments shell not cause contamination of surfeca or ground water.
NOTE: Authority cited: Sections 2755, 2756 and 2773, Public Resources Code. Reference: Saction 2773, Public Resources Code.

§ 3708. Performence Standerds for Other Agriculturai Lend. The following standards shell apply to agricultural lands, other than prime egricultural lands, when the approved end use is agriculture.

In eddition to the stendards for topsoil salvega, meintenance, and redistribution, non-prime egricultural lands shell be raclelmad so es to ba cepable of sustelning economically vieble production of crops commonly grown in the surrounding areas.
NOTE: Authority cited: Sections 2755, 2756 and 2773, Public Resources Code. Raference: Section 2773, Public Resourcas Code.

§ 3709. Performence Stendards for Buiiding, Structure, and Equipment Removei.

(a) All aquipmant, supplias and other matarials shall be stored in designatad areas (as shown in the approvad reclamation plan). All wasta shall be disposad of in accordance with state and local health and safety ordinancas.

(b) All buildings, structuras, and aquipmant shall be dismantlad and ramoved prior to final mina closura excapt those buildings, structuras, and equipment approvad in the raclamation plan as nacassary for tha end usa.

NOTE: Authority cited: Sactions 2755, 2756 and 2773, Public Resourcas Coda. Refaranca: Section 2773, Public Resources Coda.

§ 3710. Parformance Standards for Straam Protaction, Including Surface and Groundwatar.

(a) Surface and groundwatar shall ba protactad from siltation and pollutants which may diminish water quality as raquirad by tha Fadaral Clean Water Act, sactions 301 et saq. (33 U.S.C. saction 1311), 404 et seq. (33 U.S.C. section 1344), the Porter-Cologna Act, section 13000 at seq., County anti-siltation ordinances, the Ragional Watar Quality Control Board or the Stata Water Resources Control Board.

(b) In-stream surface mining oparations shall ba conductad in complianca with Saction 1600 at saq. of the California Fish and Gama Coda, saction 404 of tha Clean Watar Act, and Saction 10 of tha Rivars and Harbors Act of 1899 (33 U.S.C. 403).

(c) Extraction of sand and graval from rivar channels shall be ragulatad to control channal dagradation in ordar to prevent undarmining of bridge supports, exposure of pipalines or other structures buriad within the channal, loss of spawning habitat, lowering of ground watar lavals, destruction of riparian vagetation, and incraased straam bank erosion (exceptions may ba spacifiad in the approved raclamation plan). Changas in channal alavations and bank arosion shall be evaluated annually using racords of annual extraction quantities and benchmarkad annual cross sections and/or saquential aerial photographs to datarmine appropriata extraction locations and rates.

(d) In accordanca with raquiremants of the California Fish and Game Code saction 1600 et saq., in-straam mining activitias shall not cause fish to bacome antrappad in pools or in off-channal pits, nor shall thay rastrict spawning or migratory activitias.

NOTE: Authority citad: Sactions 2755, 2756 and 2773, Public Rasourcas Code. Refaranca: Saction 2773, Public Rasourcas Coda.

§ 3711. Parformance Standards for Topsoil Salvaga, Maintananca, and Radistribution. Whan tha approvad reclamation plan calls for ravagatation or cultivation of disturbad lands, tha following parformance standards shall apply to topsoil salvaga, maintananca, and radistribution activitias:

(a) All salvagaabla topsoil suitabla for ravagatation shall ba ramovad as a separate layar from areas to ba disturbed by mining oparations. Topsoil and vagatation ramoval shall not pracada surface mining activitias by mora than ona yaar, unlass a longar tima pariod is approvad by tha laad agency.

(b) Topsoil resourcas shall ba mappad prior to stripping and tha location of topsoil stockpiles shall ba shown on a map in tha raclamation plan. If tha amount of topsoil naadad to covar all surfacas to ba ravagatatad is not availabla on sita, other suitable matarial capable of sustaining vagatation (such as subsoil) shall ba ramovad as a saparate layer for usa as a suitable growth media. Topsoil and suitable growth media shall ba maintained in saparate stockpiles. Tast plots may ba raquirad to datarmina tha sultability of growth madia for ravagatation purposes.

(c) Soil salvaga oparations and phasas of reclamation shall ba carriad out in accordance with a schadule that: (1) is sat forth in tha approved raclamation plan; (2) minimizas the araa disturbad; and (3) is designed to achiava maximum ravagatation success allowable under the mining plan.

(d) Topsoil and suitable growth madia shall be used to phase reclamation as soon as can ba accommodated by the mining schadule prasentad in tha approvad reclamation plan following tha mining of an area. Topsoil and suitabla growth madia that cannot be utilizad immadiataly for reclamation shall ba stockpilad in an araa whara it will not ba disturbad until naadad for raclamation. Topsoil and suitable growth madia stockpilas shall be claarly idantified to distinguish them from mina wasta dumps. Topsoil and suitable growth madia stockpiles shall ba planted with a vagatative covar or shall be protacted by othar equally effactiva maasures to prevant watar and wind arosion and to discouraga waads. Ralocation of topsoil or suitabla growth madia stockpiles for purposes othar than reclamation shall raquire prior writtan approval from tha laad agancy.

(a) Topsoil and suitabla growth media shall ba radistributad in a mannar that results in a stabla, uniform thicknass consistent with tha approved and usa, sita configuration, and drainaga pattarns.

NOTE: Authority citad: Sactions 2755, 2756 and

2773, Public Resources Code. Reference: Section 2773, Public Resources Code.

§ 3712. Performance Standards for Tailing and Mine Waste Management.

State Water Resources Control Board mine waste disposal regulations in Article 7 of Chapter 15 of Title 23, California Code of Regulations, shall govern mine waste and tailings, and mine waste disposal units shall be reclaimed in conformance with this article.

NOTE: Authority cited: Sections 2755, 2756 and 2773, Public Resources Code. Reference: Section 2773, Public Resources Code.

§ 3713. Performance Standards for Closure of Surface Openings.

(a) Except those used solely for blasting or those that will be mined through within one year, all drill holes, water wells, and monitoring wells shall be completed or abandoned in accordance with each of the following:

(1) Water Code sections 13700, et seq. and 13800, et seq.;

(2) the applicable local ordinance adopted pursuant to Water Code section 13803;

(3) the applicable Department of Water Resources report issued pursuant to Water Code section 13800; and

(4) Subdivisions (1) and (2) of section 2511(g) of Chapter 15 of Title 23 regarding discharge of waste to land.

(b) Prior to closure, all portals, shafts, tunnels, or other surface openings to underground workings shall be gated or otherwise protected from public entry in order to eliminate any threat to public safety and to preserve access for wildlife habitat.

NOTE: Authority cited: Sections 2755, 2756 and 2773, Public Resources Code. Reference: Section 2773, Public Resources Code.

Article 11. Financial Assurance Mechanisms

§ 3800. Purpose. It is the purpose of this article to specify additional financial assurance mechanisms to assure reclamation pursuant to Public Resources Code Section 2710 et seq. (Surface Mining and Reclamation Act, as amended).

NOTE: Authority cited: Section 2773.1, Public Resources Code. Reference: Section 2773.1(e), Public Resources Code.

§ 3801. Authority. Review, approval, adjustment, enforcement, notification, forfeiture and all other responsibilities of the lead agency, operator and Department of Conservation with respect to financial assurances shall be conducted as prescribed in Public Resources Code Section 2710 et seq. unless expressly outlined in this article.

NOTE: Authority cited: Section 2773.1, Public Resources Code. Reference: Section 2773.1(e), Public Resources Code.

§ 3802. Definitions. The following definitions shall govern the interpretation of this article:

(a) "Budget Set Aside" means a financial assurance mechanism, meeting the requirements of Section 3806.2 of this article, by which a government entity proposes to make specific identified monies within the entity's budget available to perform reclamation pursuant to the approved reclamation plan.

(b) "Financial Assurance Amount" means that amount of money necessary to conduct and complete reclamation on the mined lands in accordance with the approved reclamation plan, plus a reasonable estimate of the administrative costs and expenses which would be incurred by the lead agency or the Department of Conservation, the total of which shall be calculated in accordance with section 3804, and shall constitute an obligation to pay by the operator.

(c) "Financial Assurance" means an instrument, fund or other form of Financial Assurance as provided in Section 2773.1(a) and (e) of the Public Resources Code and this Article.

(d) "Pledge of Revenue" means a financial assurance mechanism meeting the requirements of Section 3806.1, of this Article, by which a governmental entity proposes to make specific, identified future revenue available to perform reclamation pursuant to the approved reclamation plan.

NOTE: Authority cited: Section 2755, Public Resources Code. Reference: Sections 2726-2734, Public Resources Code.

§ 3803. Financial Assurance Mechanisms. As outlined by this article, financial assurances may take the form of any one or a combination of the following, which the lead agency, upon review by the Department of Conservation, reasonably determines are adequate to perform reclamation in accordance with the approved reclamation plan.

(a) For non-governmental entity operators:

(1) Surety bonds;

(2) Irrevocable letters of credit; and

(3) Trust funds;

(b) For governmental entity operators:

(1) Surety bonds;

(2) Irrevocable letters of credit;

(3) Trust funds;

(4) Pledges of Revenue; or

(5) Budget Set Aside.

NOTE: Authority cited: Section 2773.1, Public Resources Code. Reference: Section 2773.1(e), Public Resources Code.

§ 3804. Calculation of Financial Assurance Amount.

(a) The Financial Assurance Amount shall be calculated as prescribed in Public Resources Code Section 2773.1 and based on:

(1) an analysis of the physical activities and materials necessary to implement the approved reclamation plan;

(2) the lead agency's unit costs, or costs for third party contracting, for each of these activities, if applicable;

(3) the number of units of each of these activities, if applicable;

(4) a contingency amount not to exceed 10% of the reclamation costs.

(b) The calculated amount should not include the cost of completing mining of the site.

(c) In order for the lead agency or the Department of Conservation to determine what annual adjustments, if any, are appropriate to the Financial Assurance Amount, the operator shall annually submit to the lead agency a revision of the written calculation required under Section 3804(a).

NOTE: Authority cited: Section 2773.1, Public Resources Code. Reference: Section 2773.1(e), Public Resources Code.

§ 3805. Review by the Department of Conservation.

Pursuant to Section 2774(c), Public Resources Code, the lead agency shall submit a copy of the proposed Financial Assurance and the Calculation of Financial Assurance Amount submitted by the operator pursuant to Section 3804 to the Director of the Department of Conservation for review. With this submittal the lead agency shall include the information and documentation relied upon in calculating the amount of the proposed Financial Assurance and indicate to the Director that the Financial Assurance Amount is adequate for the lead agency or the Department of Conservation to conduct and complete reclamation on the mined lands in accordance with the approved reclamation plan. The Director shall have 45 days, upon receipt, to prepare written comments regarding the proposed Financial Assurance, if he/she so chooses.

NOTE: Authority cited: Section 2774, Public Resources Code. Reference: Section 2774(c), (d), Public Resources Code.

§ 3806. Surface mining operations owned and operated by state or local governmental entities.

In addition to the mechanisms provided in Public Resources Section 2773.1 and this article, a financial assurance mechanism for reclamation for a surface mining operation owned and operated by the state, county, city, district, or other political subdivision may be in the form of a:

(a) Pledge of Revenue; or

(b) Budget Set Aside.

These financial assurance mechanisms may only be used by the state, county, city, district, or other political subdivision.

NOTE: Authority cited: Section 2773.1, Public Resources Code. Reference: Section 2773.1(e), Public Resources Code.

§ 3806.1. Pledge of Revenue.

(a) A pledge of revenue shall consist of a resolution or other appropriate document from the governing body of the state, county, city, district, or other political subdivision responsible for reclamation of the mined lands pursuant to the approved reclamation plans. The resolution or document shall remain effective continuously throughout the period in which the pledge of revenue is used to satisfy the requirements of Section 2773.1, Public Resources Code.

(b) The pledge of revenue shall contain the following items:

(1) The resolution or document establishing the pledge of revenue;

(2) The types and sources of pledged revenue;

(3) The period of time that each source of revenue is pledged to be available;

(4) The calculation amount of the financial assurance prepared pursuant to Section 3804; and

(5) The authorization for the lead agency or the Department of Conservation to use the proceeds of the pledge to conduct and complete reclamation if the lead agency or the Department of Conservation determines that the operator is incapable of performing the reclamation covered by the pledge pursuant to Section 2773.1(b).

(c) The state, county, city, district, or other political subdivision may pledge any following types of revenue that it controls and that will be available in a timely manner to conduct and complete reclamation:

(1) Fees, rents, or other charges;

(2) Tax revenues within statutory limitations; and/or

(3) Other guaranteed revenues that are acceptable to the lead agency and the Board.

(d) If the governmental entity ceases at any time to retain control of its ability to allocate any pledged revenue to conduct and complete reclamation, the entity shall notify the lead agency and the Department of Conservation and shall obtain alternative coverage within 60 days after control lapses.

NOTE: Authority cited: Section 2773.1, Public Resources Code. Reference: Section 2773.1(e), Public Resources Code.

§ 3806.2. Budget Set Aside.

(a) A Budget Set Aside shall consist of a specific fund or line item set aside by the state, county, city, district or other political subdivision responsible for reclamation of the mined lands. The Budget Set Aside shall remain effective continuously throughout the period in which the Budget Set Aside is used to satisfy the requirements of Section 2773.1, Public Resources Code.

(b) The set aside shall contain the following items:

(1) A resolution or other appropriate document establishing the set aside or line item including proof of approval by the governing body or appropriate official of the state, county, city, district or other political subdivision;

(2) The types and sources of specific funds;

(3) The period of time that each funding source is to be available;

(4) The calculation amount of the financial assurance prepared pursuant to Section 3804; and

(5) The authorization for the lead agency or the Department of Conservation to use the funds to conduct and complete reclamation if the lead agency or the Department of Conservation determines that the operator is incapable of performing the reclamation covered by the set aside pursuant to Section 2773.1(b).

NOTE: Authority cited: Section 2773.1, Public Resources Code. Reference: Section 2773.1(e), Public Resources Code.

APPENDIX C

Project Area Ownership

Santa Barbara County:

The following parcels are either owned or leased by Coast Rock Products, Inc.

128-033-004, 128-033-005; 128-094-002, 128-094-004, 128-094-005; 128-101-001, 128-101-003; 129-030-012, 129-030-017; 129-040-003, 129-040-010, 129-040-011, 129-110-001, 129-110-004, 129-110-005, 129-110-008, 129-110-021, 129-110-025, 129-100-023, 129-100-008; 129-180-010,129-210-027; 129-220-011, 120-229-015, 129-220-024, 129-220-017, 129-220-016, 129-220-034; 133-040-011; 133-010-014, 133-010-015 and 101-050-008

The following parcels are either owned or leased by Kaiser Sand and Gravel, Inc.

129-110-013 through 129-110-018, 129-110-024, 129-210-026

San Luis Obispo County:

The following parcels are either owned or leased by Coast Rock Products, Inc.

190-421-07, 90-401-27, 90-421-08, 90-421-10, 90-421-11, 90-431-01, 90-431-03, 90-431-06, 90-431-07

Information on the ownership of specific parcels can be obtained from the County of Santa Barbara Planning and Development Department, and the County of San Luis Obispo Planning and Building Department

APPENDIX D

National Gravel Extraction Policies by the National Marine Fisheries Service

Santa Maria and Sisquoc Rivers Specific Plan

PROPOSED NATIONAL GRAVEL EXTRACTION POLICY CONSISTENCY EVALUATION

Policy Recommendations	*Project Consistency Discussion*
1) Dry pit mining on terraces or outside active floodplains should be preferred over bar skimming or wet pit mining either on floodplains or in channel.	The project is entirely dry pit mining as defined by this recommendation ("pits excavated on dry ephemeral stream beds and exposed bars"),. with no bar skimming or wet pit mining proposed. Aggregate completely outside the active floodplain is not available beyond the 25 year timeframe due to conflicts with prime agricultural land and urban development in that portion of the MRZ-2 zone. Aggregate mining limited to terraces outside the channel but within the active floodplain is evaluated in the DEIR/S as MRP-3.
2) Larger rivers and streams are preferred aggregate mining sites relative to smaller ones.	The Santa Maria/Sisquoc River system is the largest river system in the area, and the project is limited to portions of the main stems of these rivers.
3) Braided river systems are preferred aggregate mining sites relative to split, meandering, sinuous, and straight channel types, in order of preference.	The Santa Maria/Sisquoc River system is a braided channel type, which is the type least susceptible to significant impacts from mining.
4) Limit Aggregate removal quantities to avoid extended impacts on channel morphology.	The MRP-1 and MRP-1b plans were designed to be consistent with this recommendation. Overall channel slopes would not be changed significantly by the project and net sediment transport through the system would not be changed as determined in the DEIR/S. The channel morphology upstream or downstream would not be expected to significantly change due to mining. Concern has been expressed that the wide channel cross-section proposed by MRP-I and MRP-1b would result in very shallow sheet flow, blocking potential migratory fish. This concern is based on a misconception: the MRP-1 and MRP-1b plans would allows the flow to braid and meander through a wide, scoured channel much as it does now, and does not call for a highly maintained, flat-bottomed channel. As can be seen in Figures 36 a-f in the DEIR/S the rivers currently form a wide, scoured channel (averaging about 1100 feet wide on the Santa Maria and 400 feet wide on the Sisquoc), but the flowing water occupies a small part of this channel (See Figures 36a-c). This channel morphology pattern will continue in the MRP-1 and MRP-1b channels and would not be changed by proposed mining. Overall, the MRP-1 and MRP-1b alternatives were developed to most closely follow the natural channel morphology.
5) Gravel bar skimming should only be allowed under restricted conditions.	The project does not involve gravel bar skimming.
6) Pit excavations adjoining the active channel should be protected by a buffer designed to maintain separation by two or more decades.	The project is designed to exceed this standard.
7) Toxics testing should be performed where potential Toxics occur, and aggregate should not be washed in the river or riparian zone.	The project does not have the potential to release toxics, and none are identified in the DEIR/S. Aggregate washing is conducted off-channel and outside the channel at the processing plants, and wash water is routed to sediment basins for re-use, rather than discharged directly into the river.
8) In-stream roughness elements, especially large woody debris, should not be disturbed, or should be replaced or restored.	Large woody debris is rare in the Santa Maria River system largely due to the limited amount of forest and woodland in the watershed.

Policy Recommendations	*Project Consistency Discussion*
9) Aggregate mining should minimize damage to banks and their riparian zones.	The lower and middle reaches of the project area generally have minimal cottonwood/willow riparian zones , as can be seen on both current and pre-mining aerial photos. Mulefat scrub is prevalent in areas of the river not currently undergoing mining and not recently scoured by river flows. Significant riparian and wetland areas exist upstream of current mining limits. The project, with proposed conditions and mitigation measures would provide for avoidance or replacement of affected biological resources on an ongoing basis throughout the life of the project. Due to the sensitivity of biological resources in the uppermost reach of the project, upstream from current mining limits, this area has been eliminated from mining in MRP-1b, the applicant proposed alternative designed to emphasize biological resource and groundwater conservation.
10) The cumulative impacts of aggregate mining should be addressed in the permitting process.	The master plan approach being evaluated through the DEIR/S is fully consistent with this recommendation, and is much superior to a short-term project by project approach to permitting aggregate mining. Cumulative effects are evaluated in the DEIR/S.
11) An integrated environmental assessment of mining should be performed.	The DEIR/S was prepared to assess all potential impacts of the proposed project.
12) Mitigation and restoration should be an integral part of aggregate mining projects.	The proposed mining and reclamation plan with conditions and mitigation measures implements this recommendation. Most of the MRP-1 area (all but the last 2.5 miles of the Sisquoc reach) and all of the MRP-1b area has been subject to previous mining, flood control activities, and similar disturbances. The mining and reclamation plan provides the framework for comprehensive restoration/reclamation to benefit flood control, agriculture and wildlife habitat.
13) Habitat protection should be the primary goal in managing aggregate mining.	The DEIR/S requires numerous measures as listed in Section VI-D to avoid, protect, or restore habitat through approved reclamation plans. Under MRP-1b, direct effects on wetlands would be reduced from 38 acres under the original project to 10.9 acres. Direct effects on willow riparian areas would be reduced from 66 acres under the original project to 36 acres. Restoration would be required on an ongoing basis to ensure that habitat equivalent or greater than existing baseline conditions occurs within the project area during the life of the project. Triannual plan review and annual monitoring are proposed to ensure compliance with project conditions.

APPENDIX E

County of Santa Barbara
Surface Mining and Reclamation Regulations

Santa Maria and Sisquoc Rivers Specific Plan

Sec. 35-320. Reclamation and Surface Mining Permits

Sec. 35-320.1. Purpose and Intent.

The County of Santa Barbara recognizes that the extraction of minerals is essential to the continued economic well-being of the County and to the needs of the society and that the reclamation of mined lands is necessary to prevent or minimize adverse effects on the environment and to protect the public health and safety. The County also recognizes that surface mining takes place in diverse areas where the geologic, topographic, climatic, biological, and social conditions are significantly different and that reclamation operations and the specification therefore may vary accordingly. *(Amended by Ord. 4098, 5/18/93)*

The purpose and intent of this Section is to regulate surface mining operations as authorized by the California Surface Mining and Reclamation Act (SMARA) of 1975 (P.R.C. Sec. 2710 *et seq.*), hereinafter referred to as SMARA; P.R.C. Section 2207; and the California Code of Regulations adopted pursuant thereto (14 Cal. Admin., C. Sec. 3500 *et seq.*), to ensure that:

a. The adverse environmental effects of surface mining operations will be prevented or minimized and that the reclamation of mined lands will provide for the beneficial, sustainable long-term productive use of the mined and reclaimed lands; and

b. The production and conservation of minerals will be encouraged while eliminating hazards to public health and safety and avoiding or minimizng adverse effects on the environment, inlcuding but not limited to geologic subsidence, air pollution, water quality degradation, damage to biological resources, flooding, erosion, degradation of scenic quality, and noise pollution. *(Amended by Ord. 4098, 5/18/93)*

Sec. 35-320.2. Definitions.

(Added by Ord. 4098, 5/18/93)

For the purpose of Section 35-320, certain words and phrases shall be defined as follows:

Feasible: Means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. (Ref. CEQA Guidelines § 15364)

Haul Road: A road along which material is transported from the area of excavation to the processing plant or stock pile area of the surface mining operation.

Idle: To curtail for a period of one year or more surface mining operations by more than 90 percent of the operation's previous maximum annual mineral production, with the intent to resume those surface mining operations at a future date. (SMARA, Sec. 2727.1)

Minerals: Any naturally occurring chemical element or compound, or groups of elements and compounds formed from inorganic processes and organic substances, including but not limited to coal, peat, bituminous rock, but excluding geothermal resources, natural gas, and petroleum. (State Regulations, Sec. 3501) For the purpose of this Section 35-320, minerals shall also include but not be limited to: sand, gravel, diatomaceous earth, shale, limestone, flagstone, decorative stone, and rip-rap.

Operator: Any person who is engaged in surface mining operations, himself, or who contracts with others to conduct operations on his behalf, except a person who is engaged in surface mining operations as an employee with wages as his sole compensation.

Overburden: Soil, rock, or other materials that lie above a natural mineral deposit or in between mineral deposits, before or after their removal by surface mining operations. (SMARA, Sec. 2732)

Person: Any individual, firm, association, corporation, organization, or partnership, or any city, county, district, or the state or any department or agency thereof. (State Regulations, Sec. 3501)

Surface Mining Operations: All or any part of the process involved in the mining of minerals on mined lands by removing overburden and mining directly from the mineral deposits, open pit mining of minerals naturally exposed, mining by the auger method, dredging and quarrying, or surface work incidental to an underground mine. Surface mining operations shall include, but are not limited to:

(a) nplace distillation or retorting or leaching.

(b) he production and disposal of mining waste.

(c) Prospecting and exploratory activities. (SMARA, Sec. 2735)

Surface mining operations shall also include the creation of borrow pits, streambed skimming, segregation and stockpiling of mined materials (and recovery of same). (State Regulations, Sec. 3501)

Reclamation: 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 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 alternative 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. (SMARA, Sec. 2733)

Sec. 35-320.3. Incorporation of SMARA and State Regulations.
(Amended by Ord. 4098, 5/18/93)

The provisions of the California Surface Mining and Reclamation Act of 1975 (P.R.C. Sections 2710 *et seq.*) P.R.C. Section 2207, and the California Code of Regulations implementing the Act (14 Cal. Admin., Sec. 3500 *et seq.*), as either may be amended from time to time, are made a part of this paragraph by reference, with the same force and effect as if the provisions therein were specifically and fully set out herein. These regulations shall hereinafter be referred to as the State Regulations.
(Amended by Ord. 4098, 5/18/93)

Sec. 35-320.4. Applicability.
(Amended by Ord. 4098, 5/18/93)

1. Exemptions. No Conditional Use Permit or Reclamation Plan shall be required for any of the following activities:
   (a) Excavations or grading conducted for farming or onsite construction or for the purpose of restoring land following a flood or natural disaster. (SMARA, Sec. 2714(a))
   (b) Prospecting for, or the extraction of, minerals for commercial purposes and the removal of overburden in total amount of less than 1,000 cubic yards (SMARA, Sec. 2714(b)) in one or more locations or parcels under the control of one operator that do not exceed a total of one acre. A grading permit may be required for extractions or excavations of more than 50 cubic yards per County Ordinance 3937, §14.6.
   (c) Surface mining operations that are required by federal law in order to protect a mining claim, if such operations are conducted solely for that purpose. (SMARA, Sec. 2714(c))
   (d) Such other surface mining operations which the State Mining and Geology Board determines to be of an infrequent nature and which involve only minor surface disturbances. (SMARA, Sec. 2714(d))
2. Vested Rights. A Conditional Use Permit shall not be required for any person who has obtained a vested right to conduct surface mining operations prior to January 1, 1976, as long as the vested right continues and as long as no substantial changes are made in the operation except in accordance with SMARA (SMARA, Sec. 2776). However, a Reclamation Plan shall

be required for those portions of such mining operations conducted after January 1, 1976, unless a Reclamation Plan was approved by the County prior to January 1, 1976, and the person submitting that plan has accepted responsibility for carrying out that plan. Nothing in this Sec. 35-320 shall be construed as requiring the filing of a Reclamation Plan for, or the reclamation of, mined lands on which surface mining operations were conducted prior to January 1, 1976. (SMARA, Sec. 2776).

3. Earthwork. Reclamation activities shall be consistent with the appropriate provisions of the County's Grading Ordinance (Chapter 14 of the Santa Barbara County Code), and with other appropriate engineering and geologic standards.

4. Building Officials' Authority to Act to Prevent Engineering Hazards. The issuance of a CUP or approval of a Reclamation Plan shall not prevent the Building Official from thereafter requiring the correction of errors in such permit or Reclamation Plan for earthwork specification, or from preventing surface mining operations or reclamation efforts being carried out thereunder, where the Building Official has determined that a significant engineering hazard threatening public health and safety, or substantial physical damage to off-site property is likely to occur or has occurred as a result of surface mining operations or reclamation efforts. The Building Official, or in his/her absence a designated appointee, may order that correction of earthwork specifications and/or curtailment of activities is required to protect public health and safety, or substantial physical damage to off-site property. Before issuing any correction or curtailment order, the Building Official shall set a time for hearing and shall give written notice of the time and place of the hearing and the engineering hazard to be abated. Such notice shall be given to the operator ten (10) days before the hearing at which time there will be an opportunity for all concerned parties to present evidence. The notice may be served in person or by certified mail.

In the event the Building Official, or in his/her absence the designated appointee, determines there is an imminent danger to the public health and safety resulting from an alleged engineering hazard, he/she may summarily order the necessary curtailment of activities without prior notice and hearing and such order shall be obeyed upon notice of same, whether written or oral. At the same time that notice of the order is conveyed, the Building Official shall set a date, time and place for a publicly noticed hearing and review of said order as soon as possible which date shall be no later than 48 hours after such order is issued or served. Said hearing

shall be conducted in the same manner as a hearing on prior notice. After such hearing, the Building Official may modify, revoke, or retain the emergency curtailment order.

An affected person may appeal the Building Official's Order to the Planning Commission within ten (10) calendar days of the date that notice of the Building Official's order is given. Any such notice from the Building Official shall include procedures for appeal of the determination to the Planning Commission and, thereafter, to the Board of Supervisors.

If such appeal is not filed, the Building Official's order becomes final. If there is an appeal, the order of the Building Official shall remain in full force and effect until action is taken by the Planning Commission or, upon appeal, the Board of Supervisors. In the event of an appeal of the Building Official's order, the decision of the Planning Commission or Board of Supervisors shall be a final Administrative Action. Such decision shall not preclude a surface mining operator from seeking judicial relief.

5. Requirement for Conditional Use Permit and/or Reclamation Plan. Unless exempted by the provisions of Sections 35-320.4.1 or 4.2, a Major Conditional Use Permit as provided under Sec. 35-315 and/or a Reclamation Plan shall be required for all surface mining operations in all zone districts , including lead agency approved financial assurances. In all zone districts, a surface mining operation for building or construction material which involves less than a total of 1,000 cubic yards in one or more locations or contiguous parcels under the control of one operator tnat do not exceed a total of one acre is a permitted use requiring a Land Use Permit pursuant to Section 35-314. and a grading permit per Ordinance 3937.

Sec. 35-320.5. Contents of Applications for Conditional Use Permits for Surface Mining Operations and Reclamation Plans.
(Added by Ord. 4098, 5/18/93)

1. In addition to the Conditional Use Permit (CUP) application required in Sec. 35-315., all applications for CUP's for surface mining operations shall contain the Supplemental Mining Permit Application required by the Planning and Development Department. As many copies of the CUP and Supplemental Mining Permit Applications as may be required shall be submitted to the Planning and Development Department.

2. As many copies of a Reclamation Plan Application as may be required shall be submitted in conjunction with all applications for CUP's for Surface Mining Operations. For surface mining operations that are exempt from a CUP pursuant to Sec. 35-320.4, the Reclamation Plan

application shall include information concerning the mining operation that is required for processing the Reclamation Plan.

Sec. 35-320.6. Processing.

(Amended by Ord. 4098, 5/18/93)

1. Within thirty (30) days of receipt of an application for a Conditional Use Permit for surface mining operations or substantial amendment, and/or a Reclamation Plan, the Planning & Development Department (P&D) shall notify the Director of the Department of Conservation of the filing of the application(s). (SMARA, Sec. 2774(e)) Whenever mining operations are proposed in the 100-year flood plain of any stream, as shown in Zone A of the Flood Insurance Rate Maps issued by the Federal Emergency Management Agency, and within one mile, upstream or downstream, of any state highway bridge, P&D shall also notify the State Department of Transportation that the application has been received (SMARA, Sec. 2770.5).

   In addition, P&D shall promptly forward a copy of the application(s) to each of the County departments represented on the Subdivision Committee for review and recommendations to the Planning Commission. Each of said County departments shall submit a condition letter to the Planning and Development Department and to the Planning Commission as early as possible. Failure by any department to submit such condition letter prior to or during the Planning Commission's hearing on the project shall be deemed a waiver of conditions for approval by that department.

2. After the notifications called for in Section 35-320.6.1 have been made, the Planning and Development Department shall process the application(s) through environmental review.

3. Subsequent to the appropriate environmental review, the Planning and Development Department shall prepare a staff report for consideration by the Planning Commission.

4. The Planning Commission shall hold at least one noticed public hearing on the Conditional Use Permit and/or Reclamation Plan. Notice of the hearing shall be given in accordance with Sec. 35-327. (Noticing).

5. Prior to final approval of a Reclamation Plan, financial assurances (as provided in Sec. 35-320.9), or any amendments thereto, the Planning Commission shall certify to the Director of the Department of Conservation that the Reclamation Plan, financial assurances, or any amendments thereto, comply with the applicable requirements of the State Regulations and submit the plan, assurances, or amendments to the Director of the Department of Conservation

for review (SMARA, Sec. 2774(c)). The Planning Commission shall conceptually approve the Reclamation Plan, financial assurances, and any amendments thereto, before submitting it to the Director of the Department of Conservation. If a Conditional Use Permit is being processed concurrently with the Reclamation Plan, the Planning Commission may also conceptually approve the CUP at this time. However, the Planning Commission may defer action on the CUP until taking final action on the Reclamation Plan, as provided in Sec. 35-320.6.6. If necessary to comply with permit processing deadlines, the Planning Commission may conditionally approve the CUP with the condition that the Planning and Development Department shall not issue the Land Use Permit for the mining operation until financial assurances have been reviewed by the Director of the Department of Conservation and the Planning Commission has taken final action on the Reclamation Plan.

The Director of the Department of Conservation shall have 45 days to prepare written comments on the Reclamation Plan, financial assurances, or amendments thereto, if the Director of the Department of Conservation so chooses (SMARA, Sec. 2774(d)). The Planning Commission shall then hold at least one additional public hearing to evaluate written comments received from the Director of the Department of Conservation during the 45-day comment period. RMD staff shall prepare a written response describing the disposition of the major issues raised by the State for the Planning Commission's approval. In particular, when the Planning Commission's position is at variance with the recommendations and objections raised in the Director of the Department of Conservation's comments, the written response shall address, in detail, why specific comments and suggestions were not accepted (SMARA, Sec. 2774(d)). Copies of any written comments received and responses prepared by the Planning Commission shall be promptly forwarded to the operator.

6. The Planning Commission shall then take final action to approve, conditionally approve, or deny the Conditional Use Permit and/or Reclamation Plan. The Planning Commission's action shall be final, subject to appeal to the Board of Supervisors as provided in Sec. 35-327. (Appeals).

7. The Planning and Development Department shall forward a copy of each approved Conditional Use Permit for mining operations and/or approved Reclamation Plan to the Director of the

Department of Conservation. P&D shall also forward a copy of the approved financial assurances to the Director of the Department of Conservation for review.

Sec. 35-320.7. Performance Standards for Surface Mining Operations and Reclamation Plans.
(Added by Ord. 4098, 5/18/93)

1. Performance Standards for Surface Mining Operations

All surface mining operations for which a new or revised Conditional Use Permit (CUP) is required shall comply with the requirements contained in SMARA and implementing State Regulations. In addition, the following County performance standards shall apply as may be appropriate to surface mining operations that are subject to a new or substantially revised Conditional Use Permit.

a. Appearance - Mining operations shall be conducted in a neat and orderly manner, free from junk, trash, or unnecessary debris. Where in public view, salvageable equipment stored in a non-operating condition shall be suitably screened or stored in an enclosed structure.

b. Noise and Vibration - Noise and ground vibration shall be controlled so as to minimize any disturbance of neighbors. The volume of sound measured outside during calm air conditions, generated by any use on the property shall not exceed sixty-five (65) $dB(A)_{LDN}$ as measured at the location of the nearest noise sensitive use,(as defined in the County Noise Element) beyond the property boundary of the mining operation.

c. Traffic Safety -

(1) Parking shall be provided as required in DIVISION 6, PARKING REGULATIONS. Adequate provision shall be made for queuing and loading of trucks.

(2) Haul roads, as defined in Sec. 35-320.2, shall be located away from property lines where possible, except where adjoining property is part of the mining operation. Where processing facilities are not located on the same site as the mining operation, off-site haul routes shall be specified in the permit application. Such haul routes as well as other transport routes from the processing facilities to market destinations shall avoid to the maximum extent feasible, routing through residential neighborhoods.

(3) Number and location of access points to the mining operation shall be specified.

d. Dust Control - During hours of operations, all access roads shall be wetted, protected or contained in such a manner as to minimize the generation of dust.

e. Public Health and Safety -

(1) Appropriate measures, including fencing, shall be provided where necessary to provide for public safety. The Planning Commission may require fencing of all or a portion of an excavation. In determining the amount and type of protective measures that are required, the Planning Commission shall take into consideration the extent to which the property upon which the mining operation is located is adequately protected by existing security measures.

(2) Where necessary for public safety, the Planning Commission may require that excavations be posted to give reasonable public notice.

(3) Any body of water created during operations within the excavation shall be maintained in such manner as to provide for mosquito control and to prevent the creation of health hazards or public nuisance.

(4) Any generation of offensive odors or fumes, noxious gases or liquids, heat, glare, or radiation and all other activities shall be conducted in such a manner so as not to be injurious to the health, safety, or welfare of persons residing or working in the neighborhood by reason of danger to life or property.

f. Screening - To the extent feasible, screening or other aesthetic treatments, such as berms, fences, plantings of suitable shrubs and/or trees shall be required, where necessary, to minimize visibility from public view of cut slopes or mining operations, structures and equipment. Mining operations that are visible from scenic highways designated in the Comprehensive Plan, as well as from routes classified as having highest scenic values in the Open Space Element, shall be screened or other aesthetic treatments shall be used to minimize impacts on scenic resources.

g. Protection of Streams and Groundwater Basins - All applications for surface mining operations that could affect streams and/or groundwater basins shall be reviewed as necessary by other agencies as required by law.

h. Annual Reports - Surface mining operators shall forward an annual status report to the Director of the Department of Conservation and the Resource Management Department on a date established by the Director of the Department of Conservation upon forms furnished by the State Mining and Geology Board (P.R.C. Sec. 2207 (a)-(g)).

2. Performance Standards for Reclamation Plans.

All new or substantially amended Reclamation Plans shall conform to the minimum statewide performance standards required pursuant to SMARA Sec. 2773(b), and set forth in CCR 3700 et. sec., regarding wildlife habitat; backfilling, regrading, slope stability, and recontouring; revegetation; drainage, diversion structures, waterways, and erosion control; prime agricultural land reclamation, other agricultural land; building, structure, and equipment removal; stream protection, including surface and groundwater; topsoil salvage, maintenance, and redistrubution; and tailing and mine waste management; and closure of surface openings. In addition, the following County standards shall apply as may be appropriate to new or substantially amended Reclamation Plans:

a. Revegetation - All revegetation and/or reestablishment shall be in conformance with an approved Landscaping Plan, pursuant to Sec. 35-289. (General Regulations).

b. Visual Resources - The Reclamation Plan shall, to the extent feasible, provide for the protection and reclamation of the visual resources of the area affected by the mining operation. Measures may include, but not be limited to, resoiling, recontouring of the land to be compatible with the surrounding natural topography, and revegetation and the end use or uses specified by the landowner. Where the mining operation requires the leveling, cutting, removal, or other alteration of ridgelines on slopes of twenty (20) percent or more, the Reclamation Plan shall ensure that such mined areas are found compatible with the surrounding natural topography and other resources of the site.

c. Grading Regulations - All Reclamation Plans shall comply with appropriate provisions of the County's Grading Ordinance (Chapter 14 of the Santa Barbara County Code).

d. Phasing of Reclamation - (See also, Sec. 35-320.11, Interim Management Plans for Idle Mining Operations) - Reclamation Plans shall include a description of and plan for the type of surface mining to be employed and an estimated time schedule that will

provide for the completion of surface mining on each segment of the mined lands so that reclamation can be initiated at the earliest possible time on those portions of the mined lands that will not be subject to further disturbance by the surface mining operation. [SMARA, Sec. 2772(f)]. Where appropriate, interim management may also be required for mined lands that have been disturbed and will be disturbed again in future operations and yet do not qualify as "idle" within the meaning of PRC § 2727.1. Such interim management is for the purpose of minimizing adverse environmental impacts during extended periods of inactivity prior to resumption of mining and ultimate reclamation. Reclamation may be done on an annual basis, or in stages compatible with continuing operations, or on completion of all excavation, removal, or fill as approved by the Planning Commission. Each phase of reclamation shall be specifically described in the Reclamation Plan and shall include the estimated beginning and ending dates for each phase, all reclamation activities required, criteria for measuring completion of specific reclamation activities, and estimated costs as provided in Sec. 35-320.9 (Financial Assurances). The Planning Commission shall approve the reclamation schedule.

Sec. 35-320.8. Findings for Approval.
(Added by Ord. 4098, 5/18/93)

1. Surface Mining Operations.

In addition to the findings for approval of Conditional Use Permits contained in Sec. 35-315.8., approval of Conditional Use Permits for surface mining operations shall include a finding that the project complies with Section 35-320.7.1. (Performance Standards).

2. Reclamation Plans.

For Reclamation Plans, the following findings shall be required:

a. That the Reclamation Plan complies with applicable requirements of the state regulations (14 Cal. Code Regs. §§3500 *et seq.*), with appropriate provisions of the County's Grading Ordinance (Chapter 14 of the Santa Barbara County Code), and with other appropriate engineering and geologic standards;

b. That the Reclamation Plan and potential use of reclaimed land pursuant to the Plan are consistent with the provisions of this Article and the County's Comprehensive Plan.

c. That, in approving the Reclamation Plan, the required findings under CEQA can by made.

d. That the land and/or resources such as water bodies to be reclaimed will be reclaimed to a condition that is compatible with the surrounding natural environment, topography, and other resources.

e. That the Reclamation Plan will reclaim the mined lands to a usable condition which is readily adaptable for alternative land uses specified by the landowner and consistent with the Comprehensive Plan.

f. That a written response to the Director of the Department of Conservation has been prepared, describing the disposition of major issues raised by the Director of the Department of Conservation. Where the Planning Commission's position is at variance with the recommendations and objections raised by the Director of the Department of Conservation, said response shall address, in detail, why specific comments and suggestions were not accepted. (SMARA, Sec. 2774(d)

Sec. 35-320.9. Financial Assurances for Reclamation Plans.
(Amended by Ord. 4098, 5/18/94)

1. Purpose. The intent of this section is to ensure that reclamation will proceed in accordance with the approved Reclamation Plan.

2. Requirement, Forms, and Amount of Financial Assurances. As a condition of approval of any Reclamation Plan, to assure the operator's performance, the Planning Commission may require one or more forms of security which shall be released upon satisfactory performance. The applicant may post security in the form of a surety bond, irrevocable letter of credit, a trust fund, or other mechanisms as adopted by the State Board through the regulatory process. Financial assurances shall be made payable to the County of Santa Barbara and the Department of Conservation/ (SMARA, Sec. 2773.1(a)(4)).

Financial assurances may be required to ensure compliance with elements of the Reclamation Plan including but not limited to any revegetation requirements; aquatic or wildlife habitat reclamation requirements; protection of archaeological sites; reclamation of water bodies and water quality; and other mitigation measures. Financial assurances for such elements of the Plan shall be monitored by the Planning and Development Department. Financial assurances to ensure compliance with the applicable provisions of the County's

Grading Ordinance pursuant to Chapter 14 of the Santa Barbara County Code, for such factors as slope stability, and erosion and drainage control, shall be monitored by the Public Works Department. With the consent of the Public Works Department, the Planning and Development Department may act as the lead agency for the purpose of administering the financial assurances for both departments provided, however, that no operator shall be required to provide more than one financial assurance in favor of the County for the purpose of reclamation.

The amount of the financial assurances shall be based upon the estimated costs of reclamation for each year or other appropriate period stipulated in the Reclamation Plan, including any maintenance of reclaimed areas as may be required. Cost estimates shall be prepared by a licensed engineer and/or other qualified professionals retained by the operator and approved by the Director of Public Works and/or the Director of Planning and Development. Financial assurances for any activities subject to the Grading Ordinance shall be based upon estimates including but not necessarily limited to the volume of earth moved (cubic yards) for each year or other appropriate period of reclamation. Financial assurances to ensure compliance with revegetation, reclamation of water bodies, aquatic or wildlife habitat reclamation requirements, and any other applicable element of the Reclamation Plan shall be based upon cost estimates that include but may not be limited to labor, equipment, materials, and administration. In reviewing the estimated costs and establishing the amount of the financial assurances, the Public Works and Planning and Development Departments shall work together to ensure that duplication is avoided.

Where reclamation is accomplished in annual increments, the amount of financial assurances required for any one year shall be adjusted annually and shall be adequate to cover the full estimated costs for reclamation of any land projected to be in a disturbed condition from mining operations by the end of the following year. The estimated costs shall be the amount required to complete the reclamation on all areas that will not be subject to further disturbance, and to provide interim reclamation, as necessary, for any partially excavated areas in accordance with the Reclamation Plan. Financial assurances for each year shall be released upon successful completion of reclamation (including any maintenance required) of all areas that will not be subject to further disturbance and upon the operator filing additional financial

assurances for the succeeding year. Financial assurances for all subsequent years of the operation shall be handled in the same manner.

Financial assurances for reclamation that is accomplished in multiple-year phases shall be handled in the same manner as described for annual reclamation.

Sec. 35-320.10. Inspections.

(Amended by Ord. 4098, 5/18/93)

The Planning and Development Department (P&D) and/or Public Works Department shall conduct an inspection of a surface mining operation within six months of receipt of the annual report (required in Sec. 35-320.7), filed by the mining operator pursuant to PRC § 2207, solely to determine whether the surface mining operation is in compliance with the approved Conditional Use Permit and/or Reclamation Plan, and the State Regulations (SMARA, Sec. 2774 (b)). In no event shall less than one inspection be conducted in any calendar year. Said inspection may be made by a state-registered geologist, state-registered civil engineer, state-licensed landscape architect, state-registered forester, or other qualified specialists, as selected by P&D and/or the Public Works Department. All inspections shall be conducted using a form provided by the State Mining and Geology Board. P&D and/or Public Works shall notify the Director of the Department of Conservation within thirty (30) days of completion of the inspection that the inspection has been conducted and shall forward a copy of said inspection notice and any supporting documentation to the mining operator. The operator shall be solely responsible for the reasonable cost of such inspection by Public Works, Planning and Development and their agents.

Sec. 35-320.11. Interim Management Plans.

(Added by Ord. 4098, 5/18/93)

Within 90 days of a surface mining operation becoming idle, as defined in Sec. 35-320.2., the operator shall submit to the Planning and Development Department an interim management plan (SMARA, Sec. 2770 (h)). The interim management plan shall fully comply with the requirements of SMARA, Sec. 2770 (h) and shall provide measures the operator will implement to maintain the site in compliance with SMARA, including, but not limited to, all conditions of the Conditional Use Permit and/or Reclamation Plan. The interim management plan shall be processed as an amendment to the Reclamation Plan and shall not be considered a project for the purposes of environmental review (SMARA, Sec. 2770(h)). The idle mine shall comply with the financial assurance for reclamation pursuant to SMARA, Sec. 2770(h).

Within 60 days of receipt of the interim management plan, or longer period mutually agreed upon by the Planning and Development Department (P&D) and the operator, the Planning Commission shall review and approve or deny the plan in accordance with this Sec. 35-320.6.6 The operator shall have thirty (30) days or a longer period mutually agreed upon by the operator and P&D to submit a revised plan. The Planning Commission shall approve or deny the revised interim management plan within sixty (60) days of receipt. If the Planning Commission denies the revised interim management plan, the operator may appeal that action to the Board of Supervisors.

The interim management plan may remain in effect for a period not to exceed five years, at which time the Planning Commission may renew the plan for another period not to exceed five years or require the surface mining operator to commence reclamation in accordance with its approved Reclamation Plan.

Sec. 35-320.12. Time Limit for Commencement of CUP's for Surface Mining Operations.
(Added by Ord. 4098, 5/18/93)

The time limit for commencing a surface mining operation that is permitted pursuant to this Section shall be as provided in Sec. 35-315.9.1., Time Limit, Conditional Use Permits.

Sec. 35-320.13. Violations and Penalties.
(Added by Ord. 4098, 5/18/93)

If the Planning and Development Department (P&D) or the Public Works Department, based upon an annual inspection or otherwise confirmed by an inspection of the mining operation, determines that a surface mining operation is not in compliance with this Section 35-320., P&D or Public Works shall follow the procedures set forth in SMARA, Section 2774.1 and 2774.2 concerning violations and penalties.

Sec. 35-320.14. Fees.
(Added by Ord. 4098, 5/18/93)

The County shall establish such fees as it deems necessary to cover the reasonable costs incurred in implementing this Sec. 35-320., and the State Regulations, including but not limited to processing of applications, annual reports, inspections, enforcement and compliance.

APPENDIX F

County of San Luis Obispo
Surface Mining and Reclamation Regulations

Santa Maria and Sisquoc Rivers Specific Plan

22.08.180 - Surface Mining and Reclamation: Surface mining operations include the processes of removing overburden and mining directly from mineral deposits, open-pit mining of minerals naturally exposed, mining by the auger method, dredging and quarrying, or surface work incident to an underground mine. In addition, surface mining operations include, but are not limited to: Inplace distillation, retorting or leaching; the production and disposal of mining waste; prospecting and exploratory activities; borrow pitting, streambed skimming, segregation, recovery, and stockpiling of mined materials; and extractions of natural materials for building, construction.

a. **Purpose and intent.** These sections are adopted as required by the California Surface Mining and Reclamation Act of 1975 (SMARA) (Section 2207 and 2710 et seq. of the Public Resources Code and Chapter 8, Title 14, California Code of Regulations, Section 3500 et seq.). The purpose of these sections is the regulation of surface mining and related mineral extraction operations within the county. The intent is to provide for reclamation of mined lands, prevent or minimize adverse environmental effects and safety hazards, and provide for the protection and subsequent beneficial use of mined and reclaimed lands. Because surface mining occurs in areas diverse in environmental and social conditions, reclamation operations and specifications may vary accordingly.

b. **Surface mining operations - permit and reclamation plan required.** No person shall conduct surface mining operations unless a permit, financial assurances, and reclamation plan have first been approved by the county for such operations, except as otherwise provided here.

c. **Exceptions:** The provisions of Sections 22.08.181 through 22.08.192 are not applicable to:

(1) Excavations or grading conducted for farming or on-site construction, or to restore land following a flood or natural disaster when the excavation is conducted only on the land directly affected by disaster.

(2) Prospecting and exploration for minerals of commercial value where less than 1,000 cubic yards of overburden is removed in any one site of one acre or less, provided:

(i) A grading permit is required for such exploration pursuant to Section 22.05.020 (Grading); and

(ii) Each such site is restored to a natural appearing or otherwise usable condition to the approval of the Director of Planning and Building upon completion of exploration.

(3) Any surface mining operation that does not involve either the removal of a total of more than 1,000 cubic yards of minerals, ores, and overburden, or cover more than one acre in any one site. (This does not exempt the owner from obtaining a Grading Permit if required by Section 22.05.020 (Grading)).

(4) The solar evaporation of sea water or bay water for the production of salt and related minerals.

(5) Other mining operations categorically identified by the State Board pursuant to Sections 2714(d) and 2758(c), California Surface Mining and Reclamation Act of 1975.

d. Conflicting provisions. Where any conflicts arise as to materials, methods, requirements, and interpretation of different sections between this chapter, and Section 22.05.020 (Grading), the most restrictive shall govern.

[Amended 1992, Ord. 2553; 1994, Ord. 2696]

22.08.181 - Surface Mining Practices: The state guidelines for surface mining and reclamation practices contained in the Surface Mining and Reclamation Act of 1975 (SMARA) Section 2207 and 2710 et seq. of the Public Resources Code and Chapter 8, Title 14, California Code of Regulations, Section 3500 et seq. are incorporated into this chapter as though they were set fully forth here, excepting that when the provisions of this chapter are more restrictive than conflicting state sections, this chapter shall prevail, and are the minimum acceptable practices to be followed in surface mining operations.

[Amended 1994, Ord. 2696]

22.08.182 - Permit Requirements for Surface Mining:

a. New surface mining operations. Development Plan approval shall be obtained before starting any surface mining operations as defined in this chapter, except as provided in subsection b of this section. New mines shall be limited to a maximum of one operator per site, and such operator shall take full responsibility for reclamation per Section 22.08.184.

b. Existing surface mining operations. A person who has obtained a vested right to conduct a surface mining operation before January 1, 1976, need not secure a permit as required by subsection a, as long as the vested right continues and there are no

substantial changes. All operations are required to have an approved Reclamation Plan and Financial Assurances per Sections 22.08.183 and 22.08.184. Provided, however, that Development Plan approval is also required if an existing mine is changed by increasing the on-site processing capabilities of the operation or by changing the method of mining (i.e. from mechanical to hydraulic technology), or the mine is expanded beyond the external boundaries of the original surface mining site.

c. **New operations on a reclaimed site.** The resumption of surface mining operations on a site where reclamation was previously completed shall only occur pursuant to the approval of a new Development Plan and Reclamation Plan.

d. **Vested right defined.** For the purposes of surface mining operations only, a person is deemed to have a vested right if, prior to January 1, 1976, he has in good faith and in reliance upon a permit or other authorization, if a permit or other authorization was required, diligently commenced surface mining operations and incurred substantial costs for work and materials necessary therefor. Expenses incurred in obtaining an amendment to the Land Use Element, or the issuance of a permit to establish or expand a mine, are not deemed costs for work or materials.

e. **Surface mining permit review procedure.** The Department of Planning and Building will review the permit application and the reclamation plan for accuracy and completeness, and coordinate review of the application and plan with the State Department of Conservation and other agencies. A public hearing will be scheduled after the filing of both the permit application and the reclamation plan. The hearing will be held pursuant to Section 22.01.060. The purpose of the hearing will be to consider the applicant's request and to approve, conditionally approve or disapprove the issuance of a permit and reclamation plan for the proposed surface mining operation. Approval or conditional approval may be granted only upon making the findings that the application and reclamation plan or amendments to reclamation plan and reports submitted:

(1) Adequately describe the proposed operation in sufficient detail and comply with applicable state mandated requirements of SMARA;

(2) Incorporate adequate measures to mitigate the probable significant adverse environmental effects and operational visual effects of the proposed operation;

(3) Incorporate adequate measures to restore the site to a natural appearing or otherwise usable condition compatible with adjacent areas;

(4) Show proposed uses which are consistent with the county general plan; and

(5) Demonstrate that the uses proposed are not likely to cause public health or safety problems.

In addition, when any significant environmental impact has been identified, the findings mandated by the Public Resources Code shall be made.

[Amended 1992, Ord. 2553; 1992, Ord. 2583; 1994, Ord. 2696]

22.08.183 - Reclamation Plan:

a. When required.

(1) **Proposed surface mining operations.** Approval of a reclamation plan shall be obtained before starting any proposed surface mining operation for which a permit is required by Section 22.08.182.

(2) **Active surface mining operations.**

(i) No later than July 5, 1980, any person who is presently conducting surface mining operations under a vested right obtained before January 1, 1976, shall file with the Planning Department a reclamation plan for all operations conducted and planned after January 1, 1976. Provided, however, that a reclamation plan need not be filed if:

(a) A reclamation plan was approved by the county before January 1, 1976, and the person submitting that plan has accepted responsibility for reclaiming the mined lands in accordance with that plan; or

(b) The owner/operator files a letter with the Planning Department stating that the mine is being temporarily deactivated, and agreeing to file a reclamation plan as set forth in subsection a(3) of this section before resuming operations; or

(c) Surface mining operations were completed before January 1, 1976.

(ii) In the case of surface mining operations physically conducted and operated by San Luis Obispo County agencies in support of county projects, the county agency shall file the required reclamation plan , which shall be reviewed as described below in 22.08.183 (b,c & d), subject to the other provisions of this chapter.

(3) Temporarily deactivated surface mining operations:

(i) Within 90 days of a surface mining operation becoming idle, the operator shall submit an interim management plan to the department. "Idle" is defined as curtailing for a period of one year or more surface mining operations by more than 90 percent of the operation's previous maximum annual mineral production, with the intent to resume those surface mining operations at a future date. The interim management plan shall be processed as an amendment to the Reclamation Plan, but shall not be considered a project for the purposes of environmental review. The plan shall provide measures which the operator will implement to maintain the site in compliance with this ordinance, SMARA, and all conditions of the Development Plan and/or Reclamation Plan.

(ii) Within 60 days of receipt of the interim management plan, or a longer period mutually agreed upon by the Department of Planning and Building and the operator, the plan shall be reviewed by the department. During this time period, the plan will either be approved by the Review Authority or the operator shall be notified in writing of any deficiencies in the plan or additional information needed to review the submittal. The operator shall have 30 days, or a longer period if mutually agreed upon, to submit the revised plan or additional information. The Review Authority shall approve or deny the revised interim management plan within 60 days of receipt of a plan that has been determined to be complete by the department. If the plan is denied by the Review Authority, it may be appealed as described in 22.01.042.

(iii) The interim management plan may remain in effect for a period not to exceed five years, at which time the operator may apply to renew the plan for one more period not to exceed five years. The renewal shall be processed as an amendment to the Reclamation Plan and, prior to approval, the Review Authority must find that the operator has complied with the previously approved plan. The Review Authority may then either approve the renewal or require the operator to commence reclamation in accordance with its approved Reclamation Plan. In any event, the required financial assurances, sufficient to reclaim a mine in accordance

with the Reclamation Plan, shall remain in effect during the period the surface mining operation is idle. If the surface mining operation is still idle after expiration of its interim management plan, reclamation shall commence in accordance with its approved Reclamation Plan.

(iv) The owner/operator of a surface mining operation for which a vested right was obtained before January 1, 1976, and which is temporarily deactivated on the effective date of this Title shall, prior to reactivation, receive approval of a Reclamation Plan for operations to be conducted after January 1, 1976. Failure to receive approval of a reclamation plan before reactivating a temporarily deactivated operation shall create a presumption of termination of the vested right and surface mining operations shall be prohibited unless a new Surface Mining Permit is approved.

b. Reclamation plan filing and content. The filing and content of all reclamation plans shall be in accordance with the provisions of this chapter and as further provided in Section 2770 et seq. of the Public Resources Code. All applications for a reclamation plan shall be made on forms provided by the county Department of Planning and Building, and as called for by the Public Resources Code. The plan shall be prepared by a registered civil engineer, licensed landscape architect, state-registered geologist or forester, or other qualified professional approved by the Director of Planning and Building.

(1) **Reclamation Standards:** The proposed plan shall include detailed and verifiable provisions adequate to determine compliance with the minimum SMARA performance standards for reclamation as described in Section 3500 et seq. of the California Code of Regulations. The plan shall include provisions for, but shall not be limited to, the following:

(i) wildlife habitat;

(ii) backfilling, regrading, slope stability, and recontouring;

(iii) revegetation;

(iv) drainage, diversion structures, waterways, and erosion control;

(v) agricultural land reclamation;

(vi) building, structure, and equipment removal;

(vii) stream protection, including surface and groundwater;

(viii) topsoil salvage, maintenance, and redistribution;

(ix) tailing and mine waste management.

(2) **Phasing of Reclamation:** Proposed plans shall include a reclamation phasing schedule where appropriate, which is consistent with the phasing of the mining operation. Reclamation shall be initiated at the earliest possible time on those portions of the mined lands that will not be subject to further disturbance. Interim reclamation measures may also be required for areas that have been disturbed and will be disturbed again in future operations. The phasing schedule shall include the following minimum components:

(i) the beginning and expected ending dates for each phase;

(ii) a clear description of all reclamation activities;

(iii) criteria for measuring completion of each specific activity;

(iv) estimated costs for each phase of reclamation as described in Section 22.08.184.

(3) **Visual Resources.** The reclamation plan shall, to the extent feasible, provide for the protection and reclamation of the visual resources of the area affected by the mining operation. Measures may include, but not be limited to, resoiling, recontouring of the land to be compatible with the surrounding natural topography, and revegetation and the end use or uses specified by the landowner. Where the mining operation requires the leveling, cutting, removal, or other alteration of ridgelines on slopes of twenty percent or more, the reclamation plan shall ensure that such mined areas are found compatible with the surrounding natural topography and other resources of the site.

c. **Notification of Department of Conservation (state).** The state will be notified within 30 days of the filing of all permit applications and reclamation plans. The state shall have 45 days to prepare written comments prior to any final action taken by the Review Authority. Any comments provided will be evaluated and a written response describing the disposition of the major issues will be included in the staff report. When the Review Authority's position is different from the recommendations and/or objections raised in the state's comments, the staff report shall describe in detail why specific comments and suggestions were not accepted.

d. Reclamation plan review procedure. The Department of Planning and Building will review the reclamation plan for accuracy and completeness, and coordinate review of the plan by other agencies. It will be processed following the procedure as described in Section 22.02.033 (Minor Use Permit), including the environmental review process and a subsequent public hearing. A reclamation plan will be accepted for review only when the Director of Planning and Building has determined that the surface mining operation was established in accordance with legal requirements applicable at the time of its establishment. Such determination shall be based upon information submitted by the applicant, relevant county records, or a Certification of Vested Right previously issued by the county. Approval or conditional approval of a reclamation plan may be granted only upon making the finding that the reclamation plan or amendments thereto:

(1) Adequately describes the proposed operation in sufficient detail and complies with applicable requirements of SMARA;

(2) Incorporates adequate measures to mitigate the probable significant adverse environmental effects of the proposed operation;

(3) Incorporates adequate measures to restore the site to a natural appearing or otherwise usable condition compatible with adjacent areas, and to a use consistent with the General Plan. Where a significant environmental impact has been identified, all findings mandated by the Public Resources Code shall be made.

e. Amendments: Amendments to an approved reclamation plan can be submitted to the county at any time, detailing proposed changes from the original plan. Such amendments are to be filed with, and approved by the county using the same procedure required for approval of a reclamation plan by subsection d of this section.

[Amended 1994, Ord. 2696]

22.08.184 - Financial Assurances for Guarantee of Reclamation:

Appropriate security or guarantees shall be provided by the applicant to ensure proper implementation of the reclamation plan as required by the Public Resources Code, as a condition of issuance of a permit and/or approval of a reclamation plan. The guarantee may be in the form of a surety bond, trust fund, irrevocable letter of credit, or other financial assurance mechanisms acceptable and payable to the county and the State Department of Conservation (beneficiaries must be stated as "County of San Luis Obispo or Department of Conservation") and consistent with the procedure described in Section 22.02.060 . The amount of financial assurances shall be determined and processed as follows:

(1) The applicant shall provide estimated total costs of reclamation and maintenance for each year or phase as approved in the Reclamation Plan. Cost estimates shall be prepared by a licensed civil engineer, licensed landscape architect, state-registered forester, mining operator, or other qualified professionals retained by the operator and approved by the Director of Planning and Building. In estimating the costs, it shall be assumed without prejudice or insinuation that the operation could be abandoned by the operator and, consequently, the county or state may need to contract with a third party to complete reclamation of the site. Cost estimates shall include, but not be limited to, labor, equipment, materials, mobilization of equipment, administration, and reasonable profit by a third party.

(2) Two copies of the cost estimates, including documentation of the calculations, shall be submitted to the Director of Planning and Building for concurrent review by the county and the state. One copy will be transmitted to the State Department of Conservation for their review. The state shall have 45 days to prepare written comments regarding consistency with statutory requirements prior to any final action taken by the county. When the director's position is different from the recommendations and/or objections raised in the state's comments, the county will prepare a written response describing in detail why specific comments and suggestions were not accepted. Upon notification of approval of the financial assurances, the applicant will have 30 days to return a completed performance agreement and valid financial assurance mechanism to the Director of Planning and Building.

(3) The amount of the financial assurance will be reviewed as part of the annual review of the operation by the county to determine if any changes are necessary. Where reclamation is phased in annual increments, the amount shall be adjusted annually to cover the full estimated costs for reclamation of any land projected to be in a disturbed condition from mining operations by the end of the following year. The estimated costs shall be the amount required to complete the reclamation on all areas that will not be subject to further disturbance, and to provide interim reclamation, as necessary, for any partially excavated areas in accordance with the approved Reclamation Plan. Financial assurances for each year shall be reviewed upon successful completion of reclamation (including maintenance) of all areas that will not be subject to further disturbance and adjusted as necessary to provide adequate assurances for the following year. Prior to county approval, any amendments or changes to an existing financial assurance will be submitted to the state for its review.

(4) If a mining operation is sold or ownership is transferred to another person, the existing financial assurances shall remain in force and shall not be released by the lead agency until new financial assurances are secured from the new owner and have been approved by the lead agency. Financial assurances shall no longer be required of a surface mining operation, and shall be released, upon written notification by the lead agency, which shall be forwarded to the operator and the state, that reclamation has been completed in accordance with the approved reclamation plan.

[Amended 1994, Ord. 2696]

22.08.185 - Public Records: Reclamation plans, reports, applications, and other documents submitted pursuant to this chapter are public records unless the applicant states in writing that such information, or part thereof, would reveal production, reserves, or rates of depletion which are entitled to protection as proprietary information. The county shall identify and file such proprietary information as a separate part of each application. A copy of all permits, reclamation plans, reports, applications, and other documents submitted, including proprietary information, shall be furnished to the District Geologist of the State Division of Mines. Proprietary information shall be made available to persons other than the State Geologist only when authorized by the mine operator and by the mine owner. (See Section 2778 of the Public Resources Code).

22.08.186 - Annual Review: An annual inspection shall be conducted by the county for all active surface mining operations within six months of receipt of the operator's annual report filed with the State Department of Conservation and upon payment of the inspection fee to the county. The purpose of the inspection is to evaluate continuing compliance with the permit and reclamation plan. A fee for such inspections is established by the county fee resolution. All inspections will be conducted using a form provided by the State Mining and Geology Board. An inspector shall not be used who has been employed by the mining operation in any capacity during the previous 12 months. The county will notify the operator and the state within 30 days of completion of the inspection and forward copies of the inspection form and any supporting documentation. Any surface mine subject to this inspection requirement for which the inspection fee remains unpaid 30 days or more from the time it becomes due constitutes grounds for revocation of such permit or plan. Surface mining operations which are determined to be in violation by the county or the state may be subject to administrative penalties not to exceed five thousand dollars ($5,000) per day, assessed from the original date of noncompliance, pursuant to Section 2774 of the Public Resources Code and as described in Section 22.10.022 of this title.

[Amended 1994, Ord. 2696]

22.08.187 - Nuisance Abatement: Any surface mining operation existing after January 1, 1976, which is not conducted in accordance with the provisions of the chapter, constitutes a nuisance and shall be abated pursuant to Chapter 22.10 (Enforcement). Any surface mining operation for which a vested right exists, but which is deactivated as of the effective date of this Ordinance constitutes a nuisance to be abated if surface mining operations are again started without compliance with the applicable provisions of this chapter.

22.08.190 - Underground Mining: The mining and extraction of subterranean mineral deposits by means of a shaft or tunnel is subject to the following standards:

a. Permit requirements. Development Plan approval is required:

(1) To authorize the commercial production of ore; or

(2) When the total volume of tailings produced exceeds 1,000 cubic yards; or

(3) When any on-site processing of ore is proposed.

No land use permit is required for prospecting and exploration activities where the volume of tailings produced is less than 1,000 cubic yards, except when a grading permit is required by Section 22.05.020 (Grading), or any authorizations are required by the State Division of Mines and Geology, the Federal Mine Safety Administration, and/or California Regional Water Quality Control Board.

b. Surface operations. All surface operations in conjunction with an underground mine are subject to the standards for surface mining operations (Section 22.08.180 through 22.08.187).

[Amended 1992, Ord. 2553]

22.08.192 - Use of County Roads by Extraction Operations: In any case where a proposed resource extraction operation (including extraction wells, surface and subsurface mining) will use county roads for the conveyance of extraction equipment or extracted products, and when in the opinion of the county Engineer, the resource extraction operation would impact the county road to a degree that would likely cause the expenditure of additional maintenance funds, the applicant is to enter into an agreement with the county as provided by this section prior to the commencement of any resource extraction operations. When an agreement is required, the applicant shall execute such an agreement with the county Engineering

Department to deposit into the county road fund a sum to be determined by the county Engineer based upon the volume of resource being hauled over county roads as compensation for the increase in road use and road maintenance requirements generated by the project.

[Added 1981, Ord. 2063; Amended 1992, Ord. 2553]

22.08.200 - Retail Trade (S-10): The following standards apply to any retail trade use identified as an S-10 use by the Land Use Element (see Table O, Chapter 7, Part I of the Land Use Element). The standards are organized into the following sections:

22.08.201 Auto & Vehicle Dealerships
22.08.202 Automobile Service Stations
22.08.203 Building Materials Sale
22.08.208 Stores and Restaurants in Non-Commercial Categories

22.08.201 - Auto and Vehicle Dealerships: Vehicle dealerships in the Commercial Retail category are subject to the following standards. Auto parts stores are not subject to these standards when conducted entirely within a building.

a. Limitations on use. Vehicle dealerships are limited to new and/or used automobiles and motorcycles (including mopeds). In a central business district, such new vehicle dealerships are allowed provided all vehicles for sale are stored, displayed and serviced entirely within a building.

b. Permit requirement.

(1) Minor Use Permit approval where an outdoor use is proposed;

(2) As provided by Section 22.03.040 where all activities are to be conducted entirely within a building.

c. Access. From a collector, arterial or freeway frontage road, or a local street in an auto sales park development.

d. Setbacks. A minimum 10-foot landscaped setback is required from all street frontage property lines.

APPENDIX G

Glossary of Technical Terms

Santa Maria and Sisquoc Rivers Specific Plan

APPENDIX G
GLOSSARY OF TECHNICAL TERMS

ACOE	An abbreviation for the U.S. Army Corps of Engineers.
ADT	Average number of daily trips ends
Aggradation	To fill up with sediment. A rise in channel bed elevation, usually caused by sediment deposition. Aggradation occurs when the sediment supply which a river delivers to the reach under consideration is greater than the reach can hydraulically transport.
Aggregate Reserves	Aggregate resources contained in areas under Conditional Use Permit.
Aggregate Resources	Deposits of aggregate raw material that are possible to extract economically given current technology, but have no permit issued for their extraction.
Agricultural Preserve	A minimum 100-acre parcel intended to concentrate agriculture in areas reserved for agriculture.
Alluvium	A general term for clay, silt, sand, gravel, or similar unconsolidated material deposited during comparatively recent geologic time by a stream or other body of running water as a sorted or semisorted sediment in the bed of the stream or on its floodplain or delta, or as a cone or fan at the base of a mountain slope.
Anadromous	Fish species that spend most of their lifespan in the ocean, but must reproduce in freshwater.
Aquifer	A geologic formation, group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring.
Aquifer, Confined	An aquifer that is overlain by a confining bed. The confining bed has a significantly lower hydraulic conductivity than the aquifer

Aquifer, Unconfined	An aquifer in which there are no confining beds between the zone of saturation and the ground surface. There will be a water table in an unconfined aquifer, water-table aquifer is a synonym.
Artesian	Groundwater occurring under grater than atmospheric pressure.
Artesian (confined) aquifer	An aquifer bounded by aquicludes or confining beds, and containing water under artesian conditions.
Artesian well	A well deriving water from an artesian or confined aquifer in which the water level stands above the top of the aquifer.
Armor Layer	Coarse sediments remaining after fine sediments have been transported downstream.
Avifauna	Birds
Bank protection	A structure placed on a river bank to protect the bank against erosion. Such structures are usually made of riprap stones, revetments, dikes, etc.
Base Level	An established channel bottom elevation
Baseline conditions	For this project, the baseline conditions refer to the set of conditions for the present. They may also be referred to as the existing conditions before the proposed new projects.
Bed load	That portion of the sediment that travels in contact with the bed by rolling, sliding, skipping, bouncing, and siltation; it commonly travels within 3 inches of the river bed. It is also the coarser portion of the sediment load, usually composed of coarser sands, gravels and cobbles. Typically, bedload can make up from less than 10% to more than 50% of the total sediment load in Sonoran-type streams of central and southern California.
Bed Material	Material comprising the riverbed.
Bed Rock	A general term for the rock that underlies unconsolidated material.

Celerity	The velocity with which a wave advances, proportional to its wavelength and frequency.
cfs	Cubic feet per second (water)
Clastic (sediments)	Sediments composed of fragments of pre-existing rocks
CNEL	Community Noise Equivalent level. The equivalent energy (or energy average) sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and ten decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m. The CNEL is generally computed for annual average conditions.
Cofferdam	A structure placed around a bridge pier to prevent erosion.
Critical Scour	The depth of local scour at which a structure is exposed (pipeline) or undercut (bridge pier)
Cross sections	Channel sections that are perpendicular to the flow direction that are used to define the river channel geometry for a river study.
dB	Decibel. A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).
Degradation	A lowering of the channel-bed elevation, usually caused by erosion. Degradation occurs when the sediment supply which a river delivers to the reach under consideration is less than the reach can hydraulically transport.
Dissolved solids	The weight of matter in true solution in a stated volume of water, including both inorganic and organic matter.
Drainage basin	A surface area from which rainfall drains toward a single point.
Drawdown	The lowering of the water table, usually due to withdrawal

Drop structure	A rigid structure erected across a river channel through which there is a drop in channel-bed elevation.
Entrenched (stream)	A stream that has inherited its course from a previous cycle of erosion and cuts into bedrock with little modification of the original course.
Erodible bed model	A model that only considers the changes in channel-bed level by assuming that channel width does not change.
Erodible boundary model	A model that considers the changes in channel boundary, including channel-bed scour and fill, changes in channel width and changes related to channel curvature.
Evaporation	The process by which water passes from the liquid to the vapor state.
Evapotranspiration (ET)	The sum of evaporation plus transpiration.
Existing Channel	The area within the **Flood plain** that contains the **Stormwater Meander Zone** and the **Ordinary Flow Channels**.
Farmland of Local Importance	All dry farming area and permanent pasture.
Farmland of Statewide Importance	Land with a good combination of physical and chemical features for the production of agricultural crops.
Feasible	Capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors as well as considerations for employment of highly trained workers.
Field calibration	The correlation of modeling results using field data. It usually involves fine adjustments of certain parameters used in modeling to improve the correlation.
Flood hydrograph	A relationship showing how the flood discharge varies with time during its occurrence.

Flood Plain	The **Flood Plain** is that area affecting by major flood events. Downstream from Fugler Point the **Flood Plain** is contained between the flood control levee and bluffs to the northeast. Within the flood Plain are **Stormwater Meander Zones**, **Ordinary Flow Channels** as well as **High Terraces**.
Flood Terrace	The area within the **Proposed Channel** which will be inundated every 10 years or so.
Floodway	The portion of the floodplain that carries the bulk of the flood waters during major storms.
Fluvial Material	Material transported by water
Fluvial processes	Processes that are caused by stream action, including sediment transport, flood flow, erosion, deposition, and river channel changes.
Fracture	A break in a rock formation due to structural stresses. Faults, shears, joints, and planes of fracture cleavage are all types of fractures.
Gaging station	Location of flow and/or elevation gage typically maintained by the U.S. Geological Survey. Daily records are tabulated from which various measures of stream performance can be generated.
Grade control structure	A rigid structure constructed across a river channel used to stabilize the bed elevation at the location. A drop structure is also a grade control structure.
Grazing Land	Land on which the existing vegetation, whether naturally grown or through management, is suitable for grazing or browsing of livestock.
Groundwater	Water beneath the land surface contained in interconnected pores in the saturated zone that is under hydrostatic pressure. The water that enters wells and issues from springs.

Groundwater basin	A rather vague designation pertaining to a groundwater reservoir that is more or less separate from neighboring groundwater reservoirs. A groundwater basin could be separated from adjacent basins by geologic or hydrologic boundaries.
Groundwater, confined	The water contained in a confined aquifer. Pore-water pressure is greater than atmospheric at the top of the confined aquifer.
Groundwater flow	The movement of water through openings in sediment and rock that occurs in the zone of saturation.
Groundwater, perched	The water in an isolated saturated zone located within the vadose zone. It is the result of the presence of a layer of material of low hydraulic conductivity. Perched groundwater will have a perched water table.
Groundwater, unconfined	The water in an aquifer in which there is a water table.
Haul Rates	Transportation rates set by the Public Utility Commission for aggregate trucking which is approximately $0.15 per ton per mile.
Hazardous Materials	As defined by California Code of Regulations (CCR) Title 22, Section 66084, "a substance or combination of substances which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of or otherwise managed.
Head cutting	Channel-bed erosion occurring upstream of a sand or gravel pit or any other depression.
High Terrace	The areas above the **Existing** or **Proposed Channels**, in particular the areas on the north side of the river in the lower reach that area outside the project area but within the **Flood Plain.** These are comparable to similar areas that currently exist along the river that are infrequently inundated and support scrub vegetation.

Irrigated Farmland — Cropped land with a developed irrigation water supply that is dependable and of adequate quality.

L_{dn} — Day/night Average Sound Level. The equivalent energy (or energy average) sound level during a 24-hour day, obtained after addition of ten decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m. The L_{dn} is generally computed for annual average conditions.

Littoral Sand — Sand transported along the shoreline

Local Scour — The process of localized removal of sediments by high water velocity, such as at the outside of stream bends and around bridge piers.

Low Terraces — Areas that currently exist within the **Stormwater Meander Zone** that are inundated with some frequency sufficient to prevent development of extensive vegetation. These are comparable to the **Flood Terrace** in the **Proposed Channel.**

Mineral Resource Zone (MRZ) — Area mapped by the Division of Mines and Geology on the basis of an appraisal that included the study of pertinent geologic information, field investigations, and analyses of water well drilling records. Land classified as MRZ-2 indicates that significant mineral deposits are present or a high likelihood for their presence exists. Land is classified as MRZ-2 if it contains a minimum threshold value of $9.2 million ($5 million, 1978 dollars) of suitable aggregate that can be extracted profitably by current mining technology or technology which can reasonably be expected to exist in the foreseeable future.

Multiplier Effect — Results from the fact that as new funds enter an area, some portion of them is re-spent within that area, creating increased economic activity. Re-spending continues for several iterations until the percentage of that dollar becomes immeasurable.

Non-irrigated Farmland — Land on which agricultural commodities are produced utilizing stored moisture.

Open Space Subvention	State paid partial compensation to counties and cities for the foregone property tax revenues on contracted lands.
Ordinary Flow Channels	The areas which contain the average year flows. These areas have minimum vegetative cover because of the routine flows that occur there.
Overflow Channel	The upper portion of the **Proposed Channel** which will be inundated every 10 years or so.
P-C Region	Production-Consumption Region
PCC-Grade Aggregate	Portland Cement Concrete
Perched groundwater	Unconfined groundwater separated fro an underlying main body of groundwater by unsaturated material.
Percolate	The water moving by gravity or hydrostatic pressure through interstices of unsaturated rock or soil.
Percolation	Downward movement of percolate under gravity or hydrostatic pressure.
Phreatophyte	Deep rooted plant that removes water from the water table or from the soil just above it.
Pit Surge Run Stockpile	A stockpile containing raw material from the pit awaiting processing
Point bar	A crescent-shaped accumulative of sand and gravel deposited on the inside of a meander.
Precipitate	Material that will separate out of solution as a solid under changing chemical and/or physical conditions.
Precipitation	The formation of solids out of constituents that were once dissolved. Precipitation is caused by a change in conditions, such as temperature, chemical concentration, or the presence of seed particles to begin the process.
Prime Farmland	Land with the best combination of physical and chemical features for the production of agricultural crops.

Production-Consumption Region (PCR)	A major aggregate production district which includes characteristic marketing areas, a defined region in which aggregate is produced and consumed.
Progradation	The outward building of a sedimentary deposit.
Proposed Channel	The entire excavated channel, varying in width from 300 to 600 feet and sized to contain at least a 100 year flood.
Reach	An identifiable stretch of a river.
Recharge	The addition of water to a body of groundwater.
Recharge area	An area of the ground surface which is permeable and through which surface water flows downward into a body of groundwater.
Recharge basin	A basin or pit sited, constructed and operated in a manner such that water placed in the pit would infiltrate into the ground at rates exceeding that which would occur under natural conditions.
Recharge boundary	An aquifer boundary across which water flows into the aquifer. Streams and lakes are typical recharge boundaries.
Red Line	An elevation standard designed to maintain river stability and prevent impacts to existing in-river structures.
Regional Growth Forecast	A forecast of population, employment, and household growth for Santa Barbara County and seven cities to the year 2015 prepared by the Santa Barbara County Association of Governments.
Reserves	Aggregate deposits that are owned or controlled by a mining company, and that are authorized for extraction by appropriate lead agencies through a valid mining permit.
Resources	All of the potentially usable aggregate deposits within an area, including reserves.
100 Year Return Period Flood	The probable discharge that (on average) will occur only once in 100 years

Rising Water	Ground water seeping from the aquifer into the stream channel (or mining pits)
Scour (general and local)	Erosion or removal of material caused by stream action. General scour is caused by the imbalance (non-uniformity) in sediment transport along a river channel. Local scour is caused by any local obstruction to flow, such as bridge piers, abutments, tree trunks, etc.
Sediment Replenishment	The process by which sediments removed by mining or major storms are replaced through natural sediment influx associated with flows in the river.
Sediment transport/ replenishment	Sediment transport is the movement of sediment by flow measured usually in volume or weight per unit time.
Solute	A substance dissolved in a solution; the substance present in a solution in the smaller amount. For convenience, water is generally considered the solvent, even in "concentrated" solutions with water molecules in the minority.
Spill Prevention Plan	A list of measures an operator will implement to control and cleanup any spills of hazardous materials.
Stage	Elevation of water surface. "Flood stage" refers to water surface elevation during a flood event.
Stage-discharge curve	Plotting of relationship between discharge levels and water surface elevations. Curves are constructed by the U.S. Geological Survey at all of their gaging stations. The reflect the morphology of the river (depth, slope, bottom configuration) at that location and allow estimation of discharge from stage readings, or estimation of stage from discharge data.
Stormwater meander zone	That area containing the 25 to 30 year stormflow within which vegetation is suppressed by past flooding.
Study channel reach	A river channel reach that is covered i a study. Such a reach is defined by a series of cross sections taken along the channel.

Surface water	That portion of water that appears on the land surface, i.e., oceans, lakes, rivers.
Suspended sediment load	The portion of sediment yield that moves with the stream flow and is either supported by turbulent forces or colloidal suspension. Clays, silts and fine sands make up most of this; coarser sands and small gravels may be transported in suspension at the highest flows.
Taxa	Biological taxonomic unit (i.e., species, genus, family)
Thalweg	The line of lowest points of a longitudinal channel profile. It represents the channel bottom throughout the reach.
Total dissolved solids	The total concentration of dissolved constituents in solution, usually expressed in milligrams per liter.
Tractive force	The force exerted by the flow on the channel boundary or on any object in the river channel, usually measured in force per unit surface area.
Trip End	Number of trips entering and leaving a designated land use over a given period of time.
Unique Farmland	Land of lesser quality soils used for the production of the State's leading agricultural cash crops.
Water Table	The upper surface of a body of ground water in an aquifer.
Waters of the United States	Rivers, streams, estuaries, territorial seas, and most ponds, lakes, and wetlands. The lateral limits of jurisdiction for a non-tidal stream are measured at the line of ordinary high water or the limit of adjacent wetlands.

Wetlands

Wetlands are among the most biologically productive habitats. Wetlands have been diminished both in extent and quality from the historic condition. As a result, naturally occurring wetlands are an important resource. Examples of wetlands include coastal salt and brackish marshes, fresh water marshes, and vernal pools, special cases include seasonal wetlands, vegetated flats, interdunal swale wetlands, and vegetated river bars and flats (riparian areas).

Wetlands must have all of the following three attributes:

1. at least periodically, the land supports predominantly hydrophytes, that is plants adapted to moist areas.

2. the substrate is predominantly undrained hydric soil, and

3. the substrate is saturated with water or covered by shallow water at some time during the growing season of each year.

Williamson Act

A voluntary land conservation program administered by counties and cities with guidance and technical assistance from the California Department of Conservation.