

DESIGNATION OF REGIONALLY  
SIGNIFICANT CONSTRUCTION  
AGGREGATE RESOURCE AREAS IN THE  
SOUTH SAN FRANCISCO BAY,  
NORTH SAN FRANCISCO BAY,  
MONTEREY BAY  
PRODUCTION-CONSUMPTION REGIONS

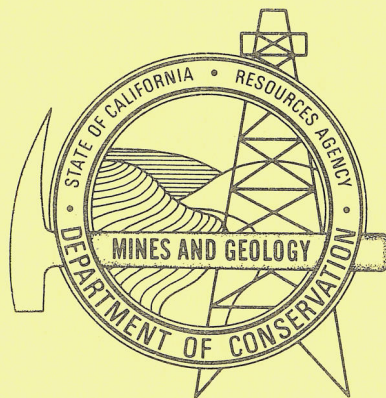
JANUARY 1987

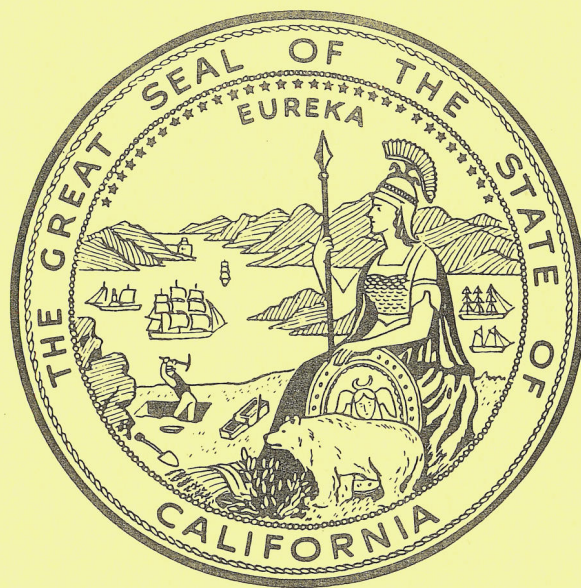
prepared by

THE CALIFORNIA DEPARTMENT OF CONSERVATION  
DIVISION OF MINES AND GEOLOGY

under the direction of

THE STATE MINING AND GEOLOGY BOARD





## DIVISION OF MINES AND GEOLOGY

JAMES F. DAVIS  
*STATE GEOLOGIST*

## STATE MINING AND GEOLOGY BOARD

James A. Anderson  
Chairman

Thomas M. Cromwell  
Arthur C. Darrow  
Dennis Hansberger  
Dewayne Holmdahl  
J. H. Jack Lucas  
R. Gary Miller  
Dorothy L. Stellar

Deborah L. Herrmann  
Special Representative

DESIGNATION OF REGIONALLY SIGNIFICANT  
CONSTRUCTION AGGREGATE RESOURCE AREAS  
IN THE SOUTH SAN FRANCISCO BAY,  
NORTH SAN FRANCISCO BAY, MONTEREY BAY  
PRODUCTION-CONSUMPTION REGIONS

JANUARY 1987

prepared by

DEPARTMENT OF CONSERVATION  
DIVISION OF MINES AND GEOLOGY

under the direction of

STATE MINING AND GEOLOGY BOARD  
1416 Ninth Street, Room 1326-2  
Sacramento, CA 95814



TABLE OF CONTENTS

Chapter	Page
I. Introduction .....	1
II. Classification-Designation Process	
A. Identifying Important Mineral Lands .....	1
B. Construction Aggregate Resources .....	3
III. Lead Agency Responsibilities	
A. General Plan Recognition .....	4
B. Goals and Policies .....	4
C. Land-Use Categories .....	6
IV. Designation of Regionally Significant Resource Areas in the South San Francisco Bay, North San Francisco Bay, and Monterey Bay P-C Regions	
A. Actions Leading to Designation .....	7
B. General Information .....	8
C. Areas of Regional Significance in the South San Francisco Bay P-C Region .....	9
D. Areas of Regional Significance in the North San Francisco Bay P-C Region .....	17
E. Areas of Regional Significance in the Monterey Bay P-C Region .....	26
V. Background Information .....	33
Appendix A .....	35
Appendix B .....	39
Appendix C .....	43



## I. INTRODUCTION

The purpose of this report is to provide information on construction aggregate deposits in the South San Francisco Bay, North San Francisco Bay, and Monterey Bay Production-Consumption (P-C) Regions that have been designated as being of regional significance by the State Mining and Geology Board. Designation of resource areas was undertaken by the Board pursuant to Section 2790 of the California Surface Mining and Reclamation Act of 1975 (SMARA), as amended.

The objective of this action is to identify construction aggregate deposits that remain potentially available and are needed to meet future demands in this region.

Maps displaying the areas designated as being of regional significance are provided on South San Francisco Bay Plates 1-22, North San Francisco Bay Plates 1-24 and Monterey Bay Plates 1-17, and are included as part of this report.

## II. CLASSIFICATION-DESIGNATION PROCESS

### A. Identifying Important Mineral Lands

The rapid growth of many California communities, particularly during the past two decades, has served to emphasize the continuing importance of mineral resource conservation as a land-use issue. To support the maintenance of our existing community structure as well as provide for its continued growth, adequate supplies of a variety of mineral commodities must be available at a reasonable cost. Yet, urban expansion itself has been a major cause of a decline in the availability of many important minerals. In many areas, for example, pressure from competing land uses has severely reduced or completely eliminated access to available mineral resources such as sand and gravel deposits. The loss of these deposits has occurred because land-use planning decisions have often been made with little, if any, knowledge of the location and importance of these resources.

In an effort to remedy this problem, SMARA provides for a mineral lands inventory process termed classification-designation. The Department of Conservation, its Division of Mines and Geology, and the State Mining and Geology Board are the State agencies responsible for administering this process. The primary objective of this process is to provide local

agencies--such as cities and counties--with information on the location, need, and importance of mineral resources within their jurisdiction. The second objective of this process is to assure that this information will be considered in local land-use planning decisions. This is implemented through the adoption of local general plan mineral resource management policies.

During the first phase of this program--classification--the State Geologist is responsible for preparing a geological inventory of select mineral commodities within a defined study region. Major objectives of a classification report include: (1) identifying the market area of the commodity (a production-consumption region); (2) projecting the future (50-year) needs for the commodity within the study region; and (3) geologically classifying the lands within the region as to the presence or absence of the commodity.

The State Geologist classifies mineral lands solely on the basis of geological factors. Existing land-use, by statute, is not considered. Classification of an area as Mineral Resource Zone-2 (MRZ-2) indicates the existence of a deposit that meets certain criteria for value and marketability. The classification report also describes other categories of mineral resource zones -- MRZ-1, 3, and 4. The first two of these categories are used to indicate if an area contains no resources (MRZ-1) or contains potential but presently unproven resources (MRZ-3). Areas where it is not possible to assign any of these three categories are classified MRZ-4.

In many regions, large portions of the areas classified as MRZ-2 are already committed to various urban uses which limit access to the underlying resources. As an aid to local planning agencies, classification reports prepared for metropolitan areas also identify MRZ-2 areas that have not been urbanized. These nonurbanized areas, called resource sectors, are important because they contain resources that remain potentially available for future use.

Once the classification report has been completed, the State Mining and Geology Board may choose to proceed with the second step in SMARA's mineral lands identification process -- designation of those deposits that are of regional or statewide significance. In contrast to classification, which inventories mineral deposits without regard to land use, the purpose of designation is to identify those deposits that are



potentially available from a land-use perspective and are of prime importance in meeting future needs of the production-consumption region. The areas normally considered for designation are the deposits situated within the resource sectors.

The Board's guidelines for the classification and designation of mineral lands are provided in Part II of Special Publication 51, California Surface Mining and Reclamation Policies and Procedures.

B. Construction Aggregate Resources

The first mineral commodity selected by the State Mining and Geology Board for classification by the State Geologist was construction aggregate--sand, gravel, and crushed rock. While its importance is often overlooked, sand and gravel is an essential commodity in today's society. As a construction material, sand and gravel is a key component in products such as Portland cement concrete, asphaltic concrete (blacktop), railroad ballast, stucco, road base, and fill. Aggregate normally provides from 80 to 100 percent of the material volume in these products. Portland cement concrete, in turn, is also used in a number of building materials such as concrete blocks and pipes, foundation pilings, precast concrete beams, and tilt-up concrete walls. In total, aggregate as a basic construction material has important economic multiplier effects. The availability of aggregate is essential, for example, to the construction industry. Developers, building and highway contractors, cement manufacturers, asphalt producers, construction workers, and truck drivers are dependent, either directly or indirectly, on a ready supply of aggregate. Therefore, the availability of aggregate deposits and their proximity to markets are critical factors in the strength of the economy.

In establishing priorities for the classification program, the Board initially directed the Division of Mines & Geology to evaluate construction aggregate deposits in the Los Angeles, San Francisco, and San Diego metropolitan areas. Several other metropolitan areas that have been classified or are in the process of classification are Bakersfield, Fresno, Sacramento-Fairfield, San Luis Obispo-Santa Barbara, Palm Springs, Stockton-Lodi, and Yuba City-Marysville.

Designation of regionally significant construction aggregate resource areas has been completed in the San Fernando Valley region of Los Angeles County, the Ventura

County region, the Orange County-Temescal Valley and San Gabriel P-C Regions, and the Western San Diego County P-C Region. The Claremont-Upland, San Bernardino and Saugus Newhall-Palmdale P-C Regions were designated concurrently with the South San Francisco Bay, North San Francisco Bay, and Monterey Bay P-C Regions.

### III. LEAD AGENCY RESPONSIBILITIES

#### A. General Plan Recognition

Both the classification report and the designation information are transmitted to the appropriate lead agencies as they are completed. Within 12 months of the receipt of this information, local lead agencies are required by the Act (Section 2762[a]) to establish mineral resource management policies in their general plans that: (1) recognize the mineral information classified by the State Geologist and transmitted by the Board; (2) assist in the management of land use that affects areas of regional significance; and (3) emphasize the conservation and development of the identified mineral deposits.

SMARA requires that a lead agency's land-use decisions involving designated areas be in accordance with its mineral resource management policies. In addition, a lead agency, in determining land use in designated areas, must balance mineral value against alternative land uses and consider the importance of the designated mineral resources to their market region as a whole and not just their importance to the lead agency's area of jurisdiction.

Prior to the adoption of mineral resource management policies, lead agencies are required to submit them to the Board for review and comment (Section 2762[b] and [c], SMARA). Any subsequent amendment to these resource management policies also requires Board review and comment.

#### B. Goals and Policies

The Board has adopted interim criteria to guide local government in the development of mineral resource management policies. The following advisory

criteria shall apply until the formal adoption and approval of State regulations governing lead agency mineral resource management policies:

#### Data and Analysis

The Surface Mining and Reclamation Act (SMARA) requires all affected cities and counties to incorporate into their general plans the mineral classification and designation information prepared by the State Geologist and approved and transmitted by the Board. Lead agencies shall incorporate into their general plan: (1) a summary of the information provided by the classification and designation reports or incorporate SMARA and Board policy by reference, and (2) maps of mineral resource areas (or incorporate by reference the classification and designation maps provided by the Board).

#### Policy Statements

Lead agencies shall adopt statements of policy recognizing the importance of the identified mineral resources, clarifying the intent that this information is to be used when making land use decisions in areas designated to be of statewide or regional significance, and emphasizing the conservation and development of identified mineral deposits.

#### Implementation Measures

In addition to a summary of the data and the adoption of policies to protect the identified mineral resources, lead agencies shall develop implementation procedures. These shall include at least two of the following:

- o Reference in general plan to location of identified mineral deposits, and a discussion of those areas targeted for conservation and possible future extraction by the lead agency.
- o Use of overlay maps or inclusion of information on any appropriate planning maps to clearly identify mineral resource areas, and those areas targeted by the lead agency for conservation and possible future extraction.

- o Use of special purpose overlay zones, mineral resource/open space zoning, or any other appropriate zoning that would: (1) identify the presence of important mineral resources, and (2) restrict the encroachment of incompatible land uses, in those areas that are to be conserved.
- o Record on property titles in the affected mineral resource areas a notice identifying the presence of important mineral resources.
- o Impose conditions upon incompatible land uses in and surrounding mineral resource zones for the purpose of mitigating the significant land use conflicts prior to approving a use that would otherwise be incompatible with mineral extraction.

C. Land-Use Categories

The Board has also developed land-use categories that are to serve as a guide to local government in establishing land uses on or adjacent to lands classified as MRZ-2 that have been designated as being of regional significance. These land-use categories are as follows:

- o Incompatible - Land uses inherently incompatible with mining and/or that require a high public or private investment in structures, land improvements, and landscaping and that would prevent mining because of the higher economic value of the land and its improvements.

Examples of such uses include high density residential, low density residential with high unit value, public facilities, intensive industrial, and commercial.

- o Compatible - Land uses inherently compatible with mining and/or that require a low public or private investment in structures, land improvements, and landscaping and that would allow mining because of the low economic value of the land and its improvements.

Examples of such uses include very low density residential (for example 1 unit per 10 acres), extensive industrial, recreation (public/commercial), agricultural, silvicultural, grazing, and open space.

- o Interim - Land uses that require structures, land improvements, and landscaping of a limited useful life and from an economic and political standpoint can be converted to mining at the end of that limited life.

IV. DESIGNATION OF RESOURCE AREAS IN THE SOUTH SAN FRANCISCO BAY, NORTH SAN FRANCISCO BAY, AND MONTEREY BAY P-C REGIONS

A. Actions Leading to Designation

The classification reports which cover the San Francisco-Monterey Bay P-C Regions, Special Report 146, Parts I-IV, were accepted by the State Mining and Geology Board August 27, 1984, and transmitted to lead agencies February 22, 1985. Based on public comments, the Board determined that it should proceed with the designation of aggregate resources in these regions.

One draft environmental impact report was prepared for these areas, was presented at a public hearing February 15, 1985, and distributed to lead agencies July 26, 1985. The final environmental impact report was certified by the Mining Board August 19, 1985.

A public hearing was held by the State Mining and Geology Board in Palm Desert, California on November 15, 1985 on the proposed text of regulations for South San Francisco. Further public hearings were held in recognition of citizen interest in Santa Rosa on January 31, 1986; in San Jose on March 18, 1986; and in Santa Cruz on March 19, 1986.

On July 11, 1986, at a regular business meeting, the State Mining and Geology Board considered designating certain areas containing construction aggregate deposits in the North San Francisco Bay P-C Region as being of regional significance. The Board's Classification-Designation Committee met several times to develop recommendations for revisions to the originally proposed designation regulations in response to public comments and the Board's own review. Two of these Committee meetings considered the South San Francisco Bay and Monterey Bay P-C Regions in San Jose on July 28, 1986 and in Santa Cruz on July 29, 1986. A Committee meeting to consider the North San Francisco Bay Region was held in Santa Rosa on April 18, 1986. The Board considered designation of the South San Francisco Bay and Monterey Bay P-C Regions and further modifications of the North San Francisco Bay Region at a regular business meeting on August 29, 1986.

Regulations describing the areas designated as being of regional significance in the South San Francisco Bay, North San Francisco Bay and Monterey Bay P-C Regions were formally adopted by the Board on October 2, 1986, by Resolution #86-7. After review and approval by the Office of Administrative Law, these regulations were incorporated into the California Administrative Code (Title 14, Division 2, Chapter 8, Subchapter 2, Article 2) as Section 3550.10 (South San Francisco Bay), Section 3550.11 (North San Francisco Bay), and Section 3550.12 (Monterey Bay), effective January 3, 1987.

B. General Information

The San Francisco-Monterey Bay area, with its population of over six million people, is the largest urbanized area in Northern California. This area includes twelve counties that border on San Francisco or Monterey bays. Although substantial portions of the region have been developed, urbanization is still occurring at a rapid rate.

The San Francisco-Monterey Bay area is divided into three Production-Consumption (P-C) regions: South San Francisco Bay, North San Francisco Bay, and Monterey Bay. Each of these regions contains a major production district and the market area which it supplies with PCC-grade aggregate. The boundary between two adjacent P-C regions represents the approximate point where a consumer could buy PCC-grade aggregate for an equal delivered price from either of the two competing production districts.

The total area contained within the boundaries of the three P-C regions in Special Report 146, Mineral Land Classification: Aggregate Materials in the San Francisco-Monterey Bay Area, is 9,360 square miles. Because urbanization was not a factor throughout the entire area, and due to the large size of each P-C region, 2,070 square miles were classified out of the total area. SR 146 is the only classification report to date that did not classify the total area within the P-C boundaries.

In the San Francisco-Monterey Bay area, there is a relative scarcity of PCC-grade sand and gravel deposits; therefore, crushed stone is used in many products usually made from aggregate. About half the production of construction aggregate from this area comes from deposits which are not of PCC quality. In order to provide accurate resource information, classification zones were established not only with regard to PCC-grade aggregate but also to materials suitable for use as asphaltic concrete aggregate, roadbase, or subbase material. If a deposit contained more than 5 million 1978 dollars worth of material of at least subbase aggregate quality, the deposit was classified MRZ-2. SR 146 stands in contrast to other P-C region studies where only PCC-grade deposits were classified.

C. Areas of Regional Significance in the South San Francisco Bay P-C Region.

Classification. Information on the construction aggregate resources of this area are provided in California Division of Mines and Geology (CDMG) Special Report 146, Part II, the classification report for the South San Francisco Bay P-C Region.

The South San Francisco Bay P-C Region covers 2,360 square miles, of which 1,240 square miles were classified. Included in the study area are the counties of Alameda, Contra Costa, San Francisco, San Mateo, and northern Santa Clara. Some of the physiographic features of the study area include the San Francisco peninsula, northern extension of the Santa Cruz Mountains, Berkeley Hills, San Francisco Bay, Half Moon Bay, Alameda Creek, San Ramon Creek, and Alamo Creek. Some of the major metropolitan centers include the cities of San Francisco, Oakland, Berkeley, San Mateo, San Jose, Alameda, Redwood City, Santa Clara, Hayward, Concord, and Livermore. The primary source of PCC-grade aggregate from this region lies within the drainage basin of Alameda Creek and its tributaries. Minor amounts of sand are obtained from San Francisco Bay and the Sacramento River near Antioch.

The South San Francisco Bay P-C Region borders the North San Francisco Bay, Monterey Bay, and Sacramento Fairfield P-C regions. SR 146 Part II shows that unless additional resources are permitted for mining or alternative resources are utilized,

existing reserves within this region will be depleted by 1999. If additional aggregate is needed in the South San Francisco Bay P-C Region on a short-term basis, the most readily available material is located in the neighboring regions. The North San Francisco Bay P-C Region is projected to have a deficit of PCC-grade aggregate, while the Monterey Bay and Sacramento-Fairfield P-C regions appear to have a surplus of material.

The following areas within the South San Francisco Bay P-C Region have been classified MRZ-2 for sand and gravel resources: in Alameda County, much of the Livermore-Amador Valley, Alameda Creek (Sunol Valley and Niles Cone areas), and the plateau area immediately south of Mission San Jose; in Contra Costa County, a low hill near Antioch, and hills three miles west of Byron; in western Santa Clara County two areas near Cupertino that are underlain by conglomerate. By far, the bulk of the sand and gravel deposits within the classified areas occurs beneath urbanized land. Such areas are considered unavailable as sources for aggregate because present land uses are incompatible with mining.

The following areas within the South San Francisco Bay P-C Region have been classified MRZ-2 for stone resources: two areas near Clayton (Contra Costa County) that are underlain by Jurassic diabase and basalt or Franciscan Complex sandstone and greenstone; several areas in the Berkeley Hills (Alameda County) that are underlain by rocks of the Briones Formation, Franciscan Complex, Leona Rhyolite, or volcanic rocks of the Moraga Formation. In western Santa Clara County, a series of northwest-trending masses of rock of the Franciscan Complex have been classified MRZ-2. Rocks of the Briones Formation in eastern Santa Clara County have also been classified MRZ-2. Cretaceous quartz diorite near Half Moon Bay, and rocks of the Franciscan Complex located near Belmont, Daly City, Pacifica, San Carlos, and at San Bruno Mountain (in San Mateo County), and in San Francisco, also have been classified MRZ-2. Some of these areas are unavailable for mining, because they occur in areas presently urbanized or committed to uses that preclude the extraction of aggregate.



Designated Areas. Based upon information in Special Report 146 Part II, the environmental impact report prepared for this action, and public testimony, the Board designated selected areas delineated as Resource Sectors in the South San Francisco Bay Production-Consumption Region. These areas are described as follows:

Sector A - Aggregate deposit located in the Amador Valley and Livermore Valley areas in the Cities of Pleasanton and Livermore in Alameda County.

Sector B - Alluvial deposit consisting of six parcels along Arroyo del Valle on the southwestern edge of Livermore in Alameda County.

Sector C - Alluvial deposit consisting of six parcels located along Arroyo Mocho on the eastern edge of Livermore in Alameda County.

Sector D - Greenstone deposit located on Apperson Ridge east of Sunol Valley in Alameda County.

Sector E - Alluvial deposit consisting of five parcels in Sunol Valley in southern Alameda County.

Sector H - Elongated sandstone deposit located on the foothills east of the Cities of Fremont and Union City in Alameda County.

Sector I - Elongated sandstone deposit consisting of four parcels located along the foothills east of the Cities of Fremont and Milpitas in Alameda and Santa Clara Counties.

Sector J - Alluvial deposit located near Mowry Landing on the southern edge of Fremont in Alameda County.

Sector K - Alluvial deposit located west of Highway 17 on the southern edge of Fremont in Alameda County.

Sector L - Alluvial deposit consisting of five parcels located between the Nimitz Freeway, Alameda Creek, the Coyote Hills, and Jarvis Avenue in the northwestern portion of the City of Fremont in Alameda County.

Sector M - Located at the southern end of the Coyote Hills on the west side of Fremont in Alameda County.

Sector N - Greenstone deposit located in the foothills east of the City of Hayward in Alameda County.

Sector O - Consists of greenstone and rhyolite located in the Berkeley Hills west of Lake Chabot in Alameda County.

Sector P - Consists of rhyolite located north of the Oak Knoll Naval Hospital in the Berkeley Hills in Alameda County.

Sector S - Consists of diabase located at Mount Zion and a smaller adjacent hill southwest of the community of Clayton in central Contra Costa County.

Sector T - Consists of basalt and andesite located at the south end of Gudde Ridge in the City of Moraga in southwestern Contra Costa County.

Sector U - Consists of basalt and andesite located at the northern end of Gudde Ridge in the Berkeley Hills of southwestern Contra Costa County.

Sector V - Consists of basalt and andesite located on a small ridge southwest of the City of Orinda in Contra Costa County.

Sector W - Sandstone and shale deposit consisting of three parcels located on the west side of the City of Richmond in Contra Costa County.

Sector X - The Guadalupe Quarry property on the north side of Mount San Bruno west of the City of Brisbane in San Mateo County.

Sector Y - Limestone and greenstone deposits located west of Pacifica near Rockaway Beach in northern San Mateo County.

Sector Z - Greenstone deposit located in the Los Altos Hills southwest of the City of Los Altos in northwestern Santa Clara County.

Sector BB - Limestone deposit located west of the City of Cupertino on Permanente Creek in Santa Clara County.

Sector CC - Greenstone deposit located northwest of Stevens Creek Reservoir west of the City of Cupertino in Santa Clara County.

Sector DD - Conglomerate deposit located northwest of Stevens Creek Reservoir on the western edge of the City of Cupertino in Santa Clara County.

Sector EE - Located immediately west of the intersection of the Capitol Expressway and Monterey Road (Highway 82) in the City of San Jose in Santa Clara County.

Sector GG - Sandstone deposit located approximately four miles south of Brentwood in eastern Contra Costa County.

Sector HH - Granitic rock deposit located northeast of the City of Half Moon Bay in western San Mateo County.

Sector II - Sandstone and siltstone deposit located in Limekiln Canyon east of Lexington Reservoir in southwestern Santa Clara County.

Sector LL - Sandstone deposit located in the foothills east of the City of Fremont in Alameda County.

TABLE I  
 DATA ON RESOURCE AREAS AND SECTORS  
 OF THE SOUTH SAN FRANCISCO BAY REGION

<u>Resource Area</u>	<u>Sector</u>	<u>Million Short Tons Resources*, (Reserves)</u>	
Livermore-Amador Valley	A-1	**	
	A-2	**	
	A-3	13	
	Total:	<u>**</u>	(**)
Livermore Valley	B-1	14	
	B-2	17	
	B-3	29	
	B-4	4	
	B-5	2	
	B-6	22	
	Total:	<u>88</u>	(0)
Livermore Valley	C-1	30	
	C-2	27	
	C-3	9	
	C-4	2	
	C-5	20	
	C-6	11	
	Total:	<u>99</u>	(0)
Apperson Ridge	D-1	138	
	D-2	299	
	D-3	604	
	Total:	<u>1,041</u>	(0)
Alameda Creek	E-1	54	
	E-2a	31	
	E-2b	20	
	E-3	19	
	E-4	15	
	E-5	3	
	Total	<u>142</u>	(**)
Niles Deposit	H	112	(0)
Scott Creek Deposit	I-1	299	
	I-2	12	
	I-3	40	
	I-4	29	
	Total:	<u>380</u>	(27)

TABLE I (cont.)

<u>Resource Area</u>	<u>Sector</u>	<u>Million Short Tons Resources*, (Reserves)</u>	
Alameda Creek	J	32	
	K-2	21	
	L-1	26	
	L-2	24	
	L-3	47	
	Total:	97	(0)
Coyote Hills Deposit	M	23	(**)
La Vista Deposit	N	**	(**)
San Leandro Deposit	O	**	(**)
Gallagher and Burke Quarry	P	**	(**)
Mount Zion Deposit	S-1	594	
	S-2	89	
	Total:	683	(**)
South Gudde Ridge	T	121	(0)
North Gudde Ridge	U	94	(0)
Orinda Deposit	V	29	(0)
Richmond Deposit	W-1	33	
	W-2	**	
	W-3	**	
	Total:	**	(**)
San Bruno Mountain	X	**	(**)
Rockaway Beach	Y	33	(**)
Nearby Quarry	Z	37	(**)
Permanente Deposit	BB	**	(**)
Stevens Creek Quarry	CC	186	(**)
Stevens Creek Quarry	DD	**	(**)
Hillsdale Deposit	EE-1	**	(**)
Ridgemoor Quarry	GG	**	(**)
Pillarcitos Quarry	HH	**	(**)
Lexington Quarry	II	**	(**)
Mission Peak Deposit	LL-1	85	
	LL-2	88	
	Total:	173	(0)
ALL SECTORS	GRAND TOTAL:	4,060	(552)

\* Includes Reserves.

\*\* Cannot be shown individually due to confidentiality;  
however, amount is included in total at bottom of page.

As noted earlier, this designation was incorporated into the California Administrative Code as Section 3550.10 (Title 14, Division 2, Chapter 8, Subchapter 1). The locations of these sectors are provided on South San Francisco Bay Plates 1 through 22. The complete text of Section 3550.10 and the accompanying maps are provided in Appendix A of this report.

As a result of changes in existing land use and concern about the availability of aggregate resources, the Board deleted all or portions of the following sectors during the designation process:

1. Sector A-1 - Boundaries of the sector were amended to delete areas for the expansion of the Livermore Airport and areas of uneconomic deposits.
2. Sector F - This deposit was not designated.
3. Sector G - This deposit was not designated.
4. Sector K-1 - This deposit was not designated.
5. Sector K-2 - Boundaries of the sector were amended to delete urbanized areas south of Irvington.
6. Sector L-1 - Boundaries of the sector were amended to delete urbanized areas north of Newark.
7. Sector L-3 - Boundaries of the sector were amended to delete urbanized areas north of Newark.
8. Sector X - Boundaries of the sector were amended to delete areas of wildlife habitat.
9. Sector Y - Boundaries of the sector were amended to delete an areas of uneconomic deposits.
10. Sector AA-1 - This deposit was not designated.
11. Sector AA-2 - This deposit was not designated.
12. Sector EE-2 - This deposit was not designated.
13. Sector JJ-1 - This deposit was not designated.

14. Sector JJ-2 - This deposit was not designated.
15. Sector KK-1 - This deposit was not designated.
16. Sector KK-2 - This deposit was not designated.
17. Sector LL-1 - Boundaries of the sector were amended to delete parklands east of Mission San Jose.
18. Sector LL-2 - Boundaries of the sector were amended to delete parklands east of Mission San Jose.
19. Sector MM-1 - This deposit was not designated.
20. Sector MM-2 - This deposit was not designated.
21. Sector MM-3 - This deposit was not designated.
22. Sector OO - This deposit was not designated.
23. Sector PP-1 - This deposit was not designated.
24. Sector PP-2 - This deposit was not designated.
25. Sector QQ - This deposit was not designated.
26. Sector RR-1 - This deposit was not designated.
27. Sector RR-2 - This deposit was not designated.
28. Sector RR-3 - This deposit was not designated.
29. Sector SS - This deposit was not designated.
30. Sector TT - This deposit was not designated.

Although the above described areas were not designated as being of regional significance, these deposits remain classified as MRZ-2 for construction aggregate. A comparison of the changes to the resource sector boundaries can be made by reviewing the appropriate plates in Special Report 146 Part II, the classification report for the South San Francisco Bay P-C Region.

D. Areas of Regional Significance in the North San Francisco Bay P-C Region.

Classification. Information on the construction aggregate resources of this area are provided in California Division of Mines and Geology (CDMG) Special Report 146, Part III, the classification report for the North San Francisco Bay P-C Region.

The North San Francisco Bay P-C Region covers 2,910 square miles. Of this total, 445 square miles were classified. This P-C region includes the counties of Marin, Napa, Solano, and Sonoma. Some of the physiographic features include the Marin Peninsula, Ring Mountain, Point Reyes, Russian River, Dry Creek, Sonoma Creek, Sulphur Springs Mountain, Austin Creek, Alexander Valley, and Petaluma River. Some of the major metropolitan centers are the cities of Santa Rosa, Novato, Vallejo, Napa, Sonoma, San Rafael, Petaluma, Cloverdale, Geyserville, Healdsburg, Guerneville, Richmond, and Sausalito. The primary source of PCC-grade aggregate for the North San Francisco Bay P-C Region comes from the Russian River in Sonoma County. Minor amounts of PCC-grade aggregate are extracted from the Gualala River in Sonoma County.

The North San Francisco Bay P-C Region borders the South San Francisco Bay, Monterey Bay, and Sacramento-Fairfield P-C Regions. SR 146 Part III shows that unless additional resources are permitted for mining or alternative resources are utilized, existing reserves will be depleted by 2036. If additional aggregate is needed in the North San Francisco Bay P-C Region on a short-term basis, the most readily available material is located in the neighboring regions, South San Francisco Bay, Monterey Bay, and Sacramento-Fairfield P-C Regions. The South San Francisco Bay P-C Region is projected to have a deficit of PCC-grade aggregate, while the Monterey Bay and Sacramento-Fairfield P-C Regions appear to have a surplus of material.

Only two sand and gravel deposits are located within urban or urbanizing areas of the North San Francisco Bay P-C Region. The stream channel of Sonoma Creek between Glen Ellen and Schellville (Sonoma County) is classified MRZ-2. Near Black Point in Marin County, portions of the Novato Conglomerate have been classified MRZ-2. However, approximately 90 percent of this deposit underlies already urbanized land. Such areas are considered unavailable as sources for aggregate because they occur in areas presently committed to uses that preclude the extraction of aggregate.

Nineteen areas within the North San Francisco Bay P-C Region have been classified MRZ-2 for stone suitable for use as crushed stone. In Marin County, Sonoma Volcanics and Franciscan Complex sandstone (graywacke) and greenstone are the principal rock



types. Greenstone and graywacke of the Franciscan Complex form the deposit classified MRZ-2 in western Solano County at Sulphur Springs Mountain. An active quarry is located in the only MRZ-2 deposit in Napa County. This deposit consists of basalt, rhyolite, and tuff of the Sonoma Volcanics, and extends into portions of four quadrangles. Twelve rock deposits are classified MRZ-2 in Sonoma County. At Petaluma a large deposit of Sonoma Volcanics basalt is quarried for asphaltic concrete aggregate, and a smaller deposit of Franciscan Complex rocks is quarried for roadbase aggregate. West of Healdsburg, greenstone of the Franciscan complex is mined for roadbase. Basalt, tuff, and related sedimentary rocks of the Sonoma Volcanics, in addition to sand and pebbly sand of the Petaluma Formation, are quarried for subbase, drain rock, and fill material near Stony Point, Petaluma and north of Sears Point. Near Glen Ellen, rhyolite and tuff of the Sonoma Volcanics are quarried for subbase, drain rock, and fill material. Also near Glen Ellen, rhyolite and tuff of the Sonoma Volcanics are quarried for flagstone and roadbase. East of Mark West Springs, pillow basalt of the Franciscan complex is quarried for roadbase and fill. Some of these areas are unavailable for mining because they occur in areas presently urbanized or committed to uses that preclude the extraction of aggregate.

The MRZ-2 sand and gravel areas that lie outside of the urbanizing boundaries are located in Sonoma County. Along the Russian River from north of Cloverdale to the vicinity of the Wohler Road Bridge, near Mirabel Heights and along the lower 15 miles of Dry Creek are extensive deposits of sand and gravel which supply the high quality aggregate for most of the North San Francisco Bay P-C Region. Two smaller stream deposits of sand and gravel are found in Austin Creek and the Gualala River, also in Sonoma County.

Designated Areas. Based upon information in Special Report 146 Part III, the environmental impact report prepared for this action, and public testimony, the Board designated selected areas delineated as Resource Sectors in the North San Francisco Bay Production-Consumption Region. These areas are described as follows:

Sector A - Channel and floodplain alluvium deposits located in the Alexander Valley of Sonoma County; extends from approximately the City of Cloverdale downstream to a point 3 miles southeast of the community of Jimtown in Sonoma County.

Sector B - Alluvial deposits of the middle reach of the Russian River and a small portion of Dry Creek 0.5 miles west of Healdsburg. The sector extends from the City of Healdsburg down the Russian River to a point near the Wohler Road bridge in Sonoma County.

Sector C - Alluvial deposits restricted to two small portions of Sonoma Creek. The first is about one mile south of Sonoma State Hospital, and the second is about one mile south of Boyes Hot Springs in Sonoma County.

Sector D - Consists of two parcels of Novato Conglomerate deposits located near Black Point in eastern Marin County.

Sector E - A small basalt deposit located on Petaluma Hill near the southeastern edge of the City of Petaluma in Sonoma County.

Sector F - A small aggregate deposit located west of the City of Cotati on Stony Point Road in Sonoma County.

Sector G - Three contiguous parcels consisting of metamorphosed graywacke and greenstone deposits located east of the City of Vallejo at the southern end of Sulphur Springs Mountain in Solano County.

Sector H - Aggregate deposit located southeast of the City of Napa in Napa County.

Sector I - Metamorphosed sandstone deposit located on Point San Pedro in eastern Marin County.

Sector J - A large deposit of andesite located on Burdell Mountain approximately two miles north of the City of Novato in Marin County.

Sector K - Rhyolite deposit located east of Dunbar Union School and northeast of the community of Glen Ellen in Sonoma County.

Sector L - Small greenstone and pillow lava deposit located in Millerton Gulch approximately 3.5 miles north of the community of Point Reyes Station in Marin County.

Sector M - A small serpentinite deposit located in upper Bowman Canyon on Burdell Mountain approximately three miles northwest of Novato in Marin County.

Sector N - A small siltstone deposit located approximately one mile west of the community of Forestville and south of Highway 116 in Sonoma County.

Sector O - A small siltstone deposit located approximately one mile west of the community of Forestville and north of Highway 116 in Sonoma County.

Sector P - A small siltstone deposit located along the west side of Green Valley approximately three miles southwest of Forestville in Sonoma County.

Sector Q - Sandstone deposit located in Cheney Gulch approximately 2.5 miles east of Bodega Bay in western Sonoma County.

Sector R - A deposit of Franciscan rocks located approximately 2.5 miles southeast of the City of Petaluma in Sonoma County.

Sector S - A small basalt deposit located approximately five miles east of Petaluma on Petaluma Creek Road in Sonoma County.

Sector T - Sandstone deposit located 1.5 miles north of Duncans Mills on Austin Creek in western Sonoma County.

Sector U - Small alluvial deposit located at the confluence of the South Fork and Wheatfield Fork of the Gualala River in northwestern Sonoma County.

Sector V - Consists of andesite located on Burdell Mountain approximately two miles north of the City of Novato in Marin County.

Sector W - Small basalt deposit located on Porter Creek Road approximately four miles east of the community of Mark West Springs in eastern Sonoma County.

Sector X - Consists of sandstone and andesite located along Highway 121 approximately 2.5 miles north of Sears Point in southeastern Sonoma County.

Sector Y - Shale deposit located approximately 2.5 miles west of Healdsburg in Sonoma County.

TABLE II

DATA ON RESOURCE AREAS AND SECTORS  
OF THE NORTH SAN FRANCISCO BAY P-C REGION

<u>Resource Area</u>	<u>Sector</u>	<u>Million Short Tons Resources*, (Reserves)</u>	
Alexander Valley	A-1	15	
	A-2a	5	
	A-2b	28	
	A-2c	32	
	A-2d	59	
	A-3a	31	
	A-3b	23	
	A-3c	19	
	A-4a	8	
	A-4b	17	
	Total:	237	(**)
Russian River and Dry Creek	B-1	12	
	B-2a	74	
	B-2b	72	
	B-2c	82	
	B-2d	17	
	B-4d	**	
	B-4e	**	
	Total:	**	(**)
Sonoma Creek	C-2a	**	
	C-3	**	
	Total:	**	(**)
Black Point	D-1	18	
	D-2	11	
	Total:	29	(0)
Petaluma Hill	E	**	(**)
Stony Point	F	**	(**)
Sulphur Springs Mountain	G-1	51	
	G-2	12	
	G-3	350	
	Total:	413	(**)

TABLE II (cont.)

<u>Resource Area</u>	<u>Sector</u>	<u>Million Short Tons Resources*, (Reserves)</u>	
Napa State Hospital	H	641	(**)
San Pedro Hill	I	**	(**)
Burdell Mountain	J	8	(0)
Nuns Canyon	K	**	(**)
Borello Quarry	L	**	(**)
Ghilotti Quarry	M	**	(**)
Blue Rock Company Quarry	N	**	(**)
Canyon Rock Quarry Company	O	**	(**)
Green Valley Quarry	P	**	(**)
Hagemann Quarry	Q	**	(**)
Hartman Quarry	R	**	(**)
Stage Gulch Quarry	S	**	(**)
Austin Creek	T	**	(**)
Gualala River	U	**	(**)
Burdell Mountain	V	31	(0)
Mark West Springs	W	**	(**)
Sonoma Rock Company	X	**	(**)
Inman Shale Pit	Y	**	(**)
ALL SECTORS	GRAND TOTAL:	1,876	(432)

\* Includes Reserves.

\*\* Cannot be shown individually due to confidentiality;  
however, amount is included in total at bottom of page.

As noted earlier, this designation was incorporated into the California Administrative Code as Section 3551.11 (Title 14, Division 2, Chapter 8, Subchapter 1). The locations of these sectors are provided on North San Francisco Bay Plates 1 through 24. The complete text of Section 3551.11 and the accompanying maps are provided in Appendix B of this report.

As a result of the changes in existing land use and concern about the availability of aggregate resources, the Board deleted all or portions of the following sectors during the designation process:

1. Sector A-1 - Boundaries of the sector were amended to delete areas outside the active channel of the Russian River or controlled by aggregate producers.
2. Sector A-2a - Boundaries of the sector were amended to delete areas outside the active channel of the Russian River.
3. Sector A-2b - Boundaries of the sector were amended to delete areas outside the active channel of the Russian River.
4. Sector A-2c - Boundaries of the sector were amended to delete areas outside the active channel of the Russian River.
5. Sector A-2d - Boundaries of the sector were amended to delete areas outside the active channel of the Russian River or controlled by aggregate producers.
6. Sector A-3a - Boundaries of the sector were amended to delete areas outside the active channel of the Russian River or controlled by aggregate producers.
7. Sector A-3b - Boundaries of the sector were amended to delete areas outside the active channel of the Russian River.
8. Sector A-3c - Boundaries of the sector were amended to delete areas outside the active channel of the Russian River.
9. Sector A-4a - Boundaries of the sector were amended to delete areas outside the active channel of the Russian River.

10. Sector A-4b - Boundaries of the sector were amended to delete areas outside the active channel of the Russian River.
11. Sector B-1 - Boundaries of the sector were amended to delete areas outside the active channel of the Russian River or controlled by aggregate producers.
12. Sector B-2a - Boundaries of the sector were amended to delete areas outside the active channel of the Russian River or controlled by aggregate producers.
13. Sector B-2b - Boundaries of the sector were amended to delete areas outside the active channel of the Russian River or controlled by aggregate producers.
14. Sector B-2c - Boundaries of the sector were amended to delete areas outside the active channel of the Russian River or controlled by aggregate producers.
15. Sector B-2d - Boundaries of the sector were amended to delete areas outside the active channel of the Russian River or controlled by aggregate producers.
16. Sector B-3 - This deposit was not designated.
17. Sector B-4a - This deposit was not designated.
18. Sector B-4b - This deposit was not designated.
19. Sector B-4c - This deposit was not designated.
20. Sector B-4d - Boundaries of the sector were amended to delete areas not controlled by aggregate producers.
21. Sector B-4e - Boundaries of the sector were amended to delete areas not controlled by aggregate producers.
22. Sector C-1 - This deposit was not designated.
23. Sector C-2a - Boundaries of the sector were amended to delete areas not controlled by aggregate producers.
24. Sector C-2b - This deposit was not designated.

25. Sector C-3 - Boundaries of the sector were amended to delete areas not controlled by aggregate producers.
26. Sector C-4 - This deposit was not designated.
27. Sector C-5 - This deposit was not designated.
28. Sector C-6 - This deposit was not designated.
29. Sector K - Boundaries of the sector were amended to delete areas not controlled by aggregate producers.

Although the above described areas were not designated as being of regional significance, these deposits remain classified as MRZ-2 for construction aggregate. A comparison of the changes to the resource sector boundaries can be made by reviewing the appropriate plates in Special Report 146 Part III, the classification report for the North San Francisco Bay P-C Region.

E. Areas of Regional Significance in the Monterey Bay P-C Region.

Classification. Information on the construction aggregate resources of this area are provided in California Division of Mines and Geology (CDMG) Special Report 146 Part IV, the classification report for the Monterey Bay P-C Region.

The Monterey Bay P-C Region covers 4,090 square miles. Of this total, 385 square miles were classified. The counties of Monterey, San Benito, southern Santa Clara, and Santa Cruz are located within the study area. Some of the physiographic features are Monterey Bay, the San Benito and Carmel rivers, Santa Cruz Mountains, and the Tres Pinos, Uvas, Llagas, Pacheco, and Coyote creeks. Some of the major metropolitan centers are the cities of Monterey, Salinas, Seaside, Hollister, Gilroy, Santa Cruz, Watsonville, and Aptos. The San Benito River, near Hollister, is the primary source of PCC-grade aggregate in this P-C region. PCC-grade aggregate is also supplied by sand and gravel operations in Marina, Felton, King City, Gilroy, and Morgan hill, and crushed stone quarries in Aromas, Soquel, and Felton.

The neighboring P-C regions of the Monterey Bay P-C Region are South San Francisco Bay P-C Region, North San Francisco Bay, Sacramento-Fairfield, Stockton-Lodi, and Merced P-C Regions. If additional



aggregate is needed in the Monterey Bay P-C Region on a short-term basis, the most readily available material is located in these neighboring regions. The North San Francisco Bay P-C Region is projected to have a shortage of PCC aggregate, and the South San Francisco Bay P-C Region is projected to have shortages of all aggregate. SR 146 Part IV shows that the Monterey Bay P-C Region has a surplus of aggregate resources. The surplus volume of reserves in the Monterey Bay P-C Region is insufficient to offset the large deficit in the adjacent South San Francisco Bay P-C Region. Sacramento-Fairfield has a surplus of aggregate resources. Projected aggregate needs and available supplies in the Stockton-Lodi and Merced P-C Regions are currently being studied or will be studied in the near future.

The following areas within the Monterey Bay P-C Region have been classified MRZ-2 for sand and gravel resources: in Santa Clara County, the stream channels of Llagas, Pacheco, and Uvas creeks (in the vicinity of Gilroy) and Coyote Creek (south San Jose); near San Juan Bautista and Hollister (San Benito County), the stream channel and portions of the floodplain of the San Benito River; the channel and floodplain of the Carmel River (near Carmel, Monterey County); two deposits of Santa Margarita Formation sandstone (near Felton and Santa Cruz, Santa Cruz County) and three deposits of Quaternary beach and dune sand (near Marina, Monterey County). Some of these areas are unavailable as sources for aggregate because they occur in areas presently committed to uses that preclude the extraction of aggregate.

The following areas within the Monterey Bay P-C Region have been classified MRZ-2 for stone resources: in San Benito County, a large deposit of Cretaceous quartz gabbro; deposits of Cretaceous quartz diorite at Monterey (Monterey County), and near Felton (Santa Cruz County); and metasedimentary rocks near Felton and near Natividad (Monterey County). As above, some of these areas are unavailable for mining, because they occur in areas presently committed to uses that preclude the extraction of aggregate.

Designated Areas. Based upon information in Special Report 146 Part IV, the environmental impact report prepared for this action, and public testimony,

the Board designated selected areas delineated as Resource Sectors in the Monterey Bay Production-Consumption Region. These areas are described as follows:

Sector A - Consists of quartz diorite located on Ben Lomond Mountain west of Felton in Santa Cruz County.

Sector B - Consists of sandstone deposit divided into three large non-contiguous parcels located north and east of Felton in Santa Cruz County.

Sector C - Sandstone deposit located near the Wilder Ranch west of the City of Santa Cruz in Santa Cruz County.

Sector D - Alluvial deposit in three separate but adjacent parcels located in Uvas Creek west of Gilroy in southern Santa Clara County.

Sector E - Channel and floodplain deposits located in a portion of the San Benito River west and south of Hollister, extending from lower Tres Pinos Creek west to State Highway 101 in central San Benito County.

Sector F - Two elongated deposits located near the community of Aromas in western San Benito County, extending from State Highway 101 northwesterly to Pajaro Gap on Highway 129, a distance of approximately five miles.

Sector G - The Natividad Quarry which consists of marble and dolomite located north of Salinas in Monterey County.

Sector H - Sand deposits in two separate but adjacent parcels located along the southern portion of Monterey Bay, north of the City of Marina.

Sector I - A large sand dune area located on the northern edge of the City of Marina in Monterey County.

Sector J - Quartz diorite located on Huckleberry Hill on the west side of the City of Monterey in Monterey County.

Sector K - Stream channel and floodplain deposit consisting of a one mile long portion of the lower Carmel River east of Highway 1 and south of the City of Carmel in Monterey County.

Sector L - Consists of quartz diorite and siltstone located on upper Soquel Creek on the east side of Sugarloaf Mountain in Santa Cruz County.

Sector M - Fluvial sand and gravel deposit located on Freedom Boulevard approximately seven miles northwest of Watsonville in southern Santa Cruz County.

Sector N - Alluvial deposit located at the confluence of Chalone Creek with the Salinas River in southern Monterey County, approximately three miles southwest of the community of Greenfield, northeast of the Southern Pacific Railroad tracks.

Sector O - Alluvial deposit consisting of two separate but adjacent parcels located at the confluence of Chalone Creek with the Salinas River in southern Monterey County, approximately three miles southwest of the community of Greenfield.

Sector P - Stream channel and floodplain deposits of San Lorenzo Creek located in the foothills of the Gabilan Range in southern Monterey County, approximately six miles northwest of King City.

Sector U - Stream channel and floodplain deposits located in three parcels along upper Pacheco Creek near Bells Station in southeastern Santa Clara County.

TABLE III

DATA ON RESOURCE AREAS AND SECTORS  
OF THE MONTEREY BAY P-C REGION

<u>Resource Area</u>	<u>Sector</u>	<u>Million Short Tons Resources*, (Reserves)</u>	
Ben Lomond Mountain Felton	A	351	
	B-1	**	
	B-2	**	
	B-3	**	
	Total:	**	(**)
Davenport Deposit	C	**	(**)
Uvas Creek	D-1a	2	
	D-1b	5	
	D-2	8	
	D-3	10	
	Total:	25	(**)
San Benito River	E-1	26	
	E-2	92	
	E-3	29	
	E-4	43	
	E-5	14	
	Total:	226	(**)
Aromas Deposit	F-1	217	
	F-2	178	
	Total:	395	(**)
Natividad Deposit	G	**	(**)
Monterey Bay	H-8	8	
	H-9	**	
	Total:	**	(**)
Monterey Bay Sand Dunes	I	208	(0)
Huckleberry Hill	J	30	(**)
Carmel River	K	3	(0)
Sugarloaf Mountain	L	**	(**)
Cabrillo Deposit	M	**	(**)

TABLE III (cont.)

<u>Resource Area</u>	<u>Sector</u>	<u>Million Short Tons Resources*, (Reserves)</u>	
Chalome Creek	N	**	(**)
	O	**	(**)
San Lorenzo Creek	P	**	(**)
Pacheco Creek	U-1	17	
	U-2	2	
	U-3	2	
	Total:	<u>21</u>	(**)
ALL SECTORS	GRAND TOTAL:	1,374	(751)

\* Includes Reserves.

\*\* Cannot be shown individually due to confidentiality;  
however, amount is included in total at bottom of page.

As noted earlier, this designation was incorporated into the California Administrative Code as Section 3550.12 (Title 14, Division 2, Chapter 8, Subchapter 1). The locations of these sectors are provided on Monterey Bay Plates 1 through 17. The complete text of Section 3550.12 and the accompanying maps are provided in Appendix C of this report.

As a result of the changes in existing land use and concern about the availability of aggregate resources, the Board deleted all or portions of the following sectors during the designation process:

1. Sector A - Boundaries of the sector were amended to delete areas of localized high groundwater on Ben Lomond Mountain.
2. Sector B-1 - Boundaries of the sector were amended to delete areas indicated by the County of Santa Cruz.
3. Sector B-2 - Boundaries of the sector were amended to delete areas indicated by the County of Santa Cruz and areas depleted of resources.
4. Sector B-3 - Boundaries of the sector were amended to delete areas indicated by the County of Santa Cruz.
5. Sector H-5 - This deposit was not designated.
6. Sector H-10 - This deposit was not designated.
7. Sector J - Boundaries of the sector were amended to delete City of Monterey property.
8. Sector Q - This deposit was not designated.

Although the above described areas were not designated as being of regional significance, these deposits remain classified as MRZ-2 for construction aggregate. A comparison of the changes to the resource sector boundaries can be made by reviewing the appropriate plates in Special Report 146 Part IV, the classification report for the Monterey Bay P-C Region.

## V. BACKGROUND INFORMATION

Questions on this designation report, the Department of Conservation's classification-designation program, or the general planning requirements of the Surface Mining and Reclamation Act should be directed to the State Mining and Geology Board, 1416 Ninth Street, Room 1326-2, Sacramento, California 95814, telephone (916) 322-1082.

Copies of the classification reports for the South San Francisco Bay, North San Francisco Bay, and Monterey Bay P-C Regions are available from the Department's Division of Mines and Geology. The titles of these publications are:

Special Report 146, Mineral Land Classification: Aggregate Materials in the San Francisco - Monterey Bay Area, Part I, Project Description: Mineral Land Classification for Construction Aggregate in the San Francisco - Monterey Bay Area, 1983, California Division of Mines and Geology, by M. Stinson, M. Manson, and J. Plappert.

Special Report 146, Mineral Land Classification: Aggregate Materials in the San Francisco - Monterey Bay Area, Part II, Classification of Aggregate Resource Areas, South San Francisco Bay Production - Consumption Region, 1983, California Division of Mines and Geology, by M. Stinson, M. Manson, and J. Plappert.

Special Report 146, Mineral Land Classification: Aggregate Materials in the San Francisco - Monterey Bay Area, Part III, Classification of Aggregate Resource Areas, North San Francisco Bay Production - Consumption Region, 1983, California Division of Mines and Geology, by M. Stinson, M. Manson, and J. Plappert.

Special Report 146, Mineral Land Classification: Aggregate Materials in the San Francisco - Monterey Bay Area, Part IV, Classification of Aggregate Resource Areas, Monterey Bay Production - Consumption Region, 1983, California Division of Mines and Geology, by M. Stinson, M. Manson, and J. Plappert.

Address mail orders to the California Department of Conservation, Division of Mines and Geology, P.O. Box 2980, Sacramento, CA 95812. Copies of the classification reports are available in select public libraries in the San Francisco and Monterey areas.





Title 14. Natural Resources  
Division 2. Department of Conservation  
Chapter 8. Mining and Geology  
Subchapter 1. State Mining and Geology Board

Article 2. Areas Designated to be of Regional Significance

Section 3550.10 Construction Aggregate Resources, South San Francisco Bay Region.

A set of maps identifying the exact locations of the designated resource areas entitled "Regionally Significant Construction Aggregate Resource Areas in the South San Francisco Bay Production - Consumption Region" is incorporated by reference into this regulation. These maps are available from the State Mining and Geology Board's office in Sacramento.

The construction aggregate deposits in the following areas are designated as being of regional significance:

Sector A - Aggregate deposit located in the Amador Valley and Livermore Valley areas in the cities of Pleasanton and Livermore in Alameda County.

Sector B - Alluvial deposit consisting of six parcels along Arroyo del Valle on the southwestern edge of Livermore in Alameda County.

Sector C - Alluvial deposit consisting of six parcels located along Arroyo Mocho on the eastern edge of Livermore in Alameda County.

Sector D - Greenstone deposit located on Apperson Ridge east of Sunol Valley in Alameda County.

Sector E - Alluvial deposit consisting of five parcels in Sunol Valley in southern Alameda County.

Sector H - Elongated sandstone deposit located on the foothills east of the cities of Fremont and Union City in Alameda County.

Sector I - Elongated sandstone deposit consisting of four parcels located along the foothills east of the Cities of Fremont and Milpitas in Alameda and Santa Clara counties.

Sector J - Alluvial deposit located near Mowry Landing on the southern edge of Fremont in Alameda County.

Sector K - Alluvial deposit located west of Highway 17 on the southern edge of Fremont in Alameda County.

Sector L - Alluvial deposit consisting of five parcels located between the Nimitz Freeway, Alameda Creek, the Coyote Hills, and Jarvis Avenue in the northwestern portion of the City of Fremont in Alameda County.

Sector M - Located at the southern end of the Coyote Hills on the west side of Fremont in Alameda County.

Sector N - Greenstone deposit located in the foothills east of the City of Hayward in Alameda County.

Sector O - Consists of greenstone and rhyolite located in the Berkeley Hills west of Lake Chabot in Alameda County.

Sector P - Consists of rhyolite located north of the Oak Knoll Naval Hospital in the Berkeley Hills in Alameda County.

Sector S - Consists of diabase located at Mount Zion and a smaller adjacent hill southwest of the community of Clayton in central Contra Costa County.

Sector T - Consists of basalt and andesite located at the south end of Gudde Ridge in the City of Moraga in southwestern Contra Costa County.

Sector U - Consists of basalt and andesite located at the northern end of Gudde Ridge in the Berkeley Hills of southwestern Contra Costa County.

Sector V - Consists of basalt and andesite located on a small ridge southwest of the City of Orinda in Contra Costa County.

Sector W - Sandstone and shale deposit consisting of three parcels located on the west side of the City of Richmond in Contra Costa County.

Sector X - The Guadalupe Quarry property on the north side of Mount San Bruno west of the City of Brisbane in San Mateo County.

Sector Y - Limestone and greenstone deposits located west of Pacifica near Rockaway Beach in northern San Mateo County.

Sector Z - Greenstone deposit located in the Los Altos Hills southwest of the City of Los Altos in northwestern Santa Clara County.

Sector BB - Limestone deposit located west of the City of Cupertino on Permanente Creek in Santa Clara County.

Sector CC - Greenstone deposit located northwest of Stevens Creek Reservoir west of the City of Cupertino in Santa Clara County.

Sector DD - Conglomerate deposit located northwest of Stevens Creek Reservoir on the western edge of the City of Cupertino in Santa Clara County.

Sector EE - Located immediately west of the intersection of the Capitol Expressway and Monterey Road (Highway 82) in the City of San Jose in Santa Clara County.

Sector GG - Sandstone deposit located approximately four miles south of Brentwood in eastern Contra Costa County.

Sector HH - Granitic rock deposit located northeast of the City of Half Moon Bay in western San Mateo County.

Sector II - Sandstone and siltstone deposit located in Limekiln Canyon east of Lexington Reservoir in southwestern Santa Clara County.

Sector LL - Sandstone deposit located in the foothills east of the City of Fremont in Alameda County.

NOTE: Authority Cited: Section 2790, Public Resources Code.  
Reference: Sections 2726, 2761-63, and 2790-92, Public Resources Code.



Title 14. Natural Resources  
Division 2. Department of Conservation  
Chapter 8. Mining and Geology  
Subchapter 1. State Mining and Geology Board

Article 2. Areas Designated to be of Regional Significance

Section 3550.11 Construction Aggregate Resources, North San Francisco Bay Region.

A set of maps identifying the exact locations of the designated resource areas entitled "Regionally Significant Construction Aggregate Resource Areas in the North San Francisco Bay Production - Consumption Region" is incorporated by reference into this regulation. These maps are available from the State Mining and Geology Board's office in Sacramento.

The construction aggregate deposits in the following areas are designated as being of regional significance:

Sector A - Channel and floodplain alluvium deposits located in the Alexander Valley of Sonoma County; extends from approximately the City of Cloverdale downstream to a point 3 miles southeast of the community of Jimtown in Sonoma County.

Sector B - Alluvial deposits of the middle reach of the Russian River and a small portion of Dry Creek 0.5 miles west of Healdsburg. The sector extends from the City of Healdsburg down the Russian River to a point near the Wohler Road bridge in Sonoma County.

Sector C - Alluvial deposits restricted to two small portions of Sonoma Creek. The first is about one mile south of Sonoma State Hospital, and the second is about one mile south of Boyes Hot Springs in Sonoma County.

Sector D - Consists of two parcels of Novato Conglomerate deposits located near Black Point in eastern Marin County.

Sector E - A small basalt deposit located on Petaluma Hill near the southeastern edge of the City of Petaluma in Sonoma County.

Sector F - A small aggregate deposit located west of the City of Cotati on Stony Point Road in Sonoma County.

Sector G - Three contiguous parcels consisting of metamorphosed graywacke and greenstone deposits located east of the City of Vallejo at the southern end of Sulphur Springs Mountain in Solano County.

Sector H - Aggregate deposit located southeast of the City of Napa in Napa County.

Sector I - Metamorphosed sandstone deposit located on Point San Pedro in eastern Marin County.

Sector J - A large deposit of andesite located on Burdell Mountain approximately two miles north of the City of Novato in Marin County.

Sector K - Rhyolite deposit located east of Dunbar Union School and northeast of the community of Glen Ellen in Sonoma County.

Sector L - Small greenstone and pillow lava deposit located in Millerton Gulch approximately 3.5 miles north of the community of Point Reyes Station in Marin County.

Sector M - A small serpentinite deposit located in upper Bowman Canyon on Burdell Mountain approximately three miles northwest of Novato in Marin County.

Sector N - A small siltstone deposit located approximately one mile west of the community of Forestville and south of Highway 116 in Sonoma County.

Sector O - A small siltstone deposit located approximately one mile west of the community of Forestville and north of Highway 116 in Sonoma County.

Sector P - A small siltstone deposit located along the west side of Green Valley approximately three miles southwest of Forestville in Sonoma County.

Sector Q - Sandstone deposit located in Cheney Gulch approximately 2.5 miles east of Bodega Bay in western Sonoma County.

Sector R - A deposit of Franciscan rocks located approximately 2.5 miles southeast of the City of Petaluma in Sonoma County.

Sector S - A small basalt deposit located approximately five miles east of Petaluma on Petaluma Creek Road in Sonoma County.

Sector T - Sandstone deposit located 1.5 miles north of Duncans Mills on Austin Creek in western Sonoma County.

Sector U - Small alluvial deposit located at the confluence of the South Fork and Wheatfield Fork of the Gualala River in northwestern Sonoma County.

Sector V - Consists of andesite located on Burdell Mountain approximately two miles north of the City of Novato in Marin County.

Sector W - Small basalt deposit located on Porter Creek Road approximately four miles east of the community of Mark West Springs in eastern Sonoma County.

Sector X - Consists of sandstone and andesite located along Highway 121 approximately 2.5 miles north of Sears Point in southeastern Sonoma County.

Sector Y - Shale deposit located approximately 2.5 miles west of Healdsburg in Sonoma County.

NOTE: Authority Cited: Section 2790, Public Resources Code.  
Reference: Sections 2726, 2761-63, and 2790-92, Public Resources Code.





Title 14. Natural Resources  
Division 2. Department of Conservation  
Chapter 8. Mining and Geology  
Subchapter 1. State Mining and Geology Board

Article 2. Areas Designated to be of Regional Significance

Section 3550.12 Construction Aggregate Resources, Monterey Bay Region.

A set of maps identifying the exact locations of the designated resource areas entitled "Regionally Significant Construction Aggregate Resource Areas in the Monterey Bay Production - Consumption Region" is incorporated by reference into this regulation. These maps are available from the State Mining and Geology Board's office in Sacramento.

The construction aggregate deposits in the following areas are designated as being of regional significance:

Sector A - Consists of quartz diorite located on Ben Lomond Mountain west of Felton in Santa Cruz County.

Sector B - Consists of sandstone deposit divided into three large non-contiguous parcels located north and east of Felton in Santa Cruz County.

Sector C - Sandstone deposit located near the Wilder Ranch west of the City of Santa Cruz in Santa Cruz County.

Sector D - Alluvial deposit in three separate but adjacent parcels located in Uvas Creek west of Gilroy in southern Santa Clara County.

Sector E - Channel and floodplain deposits located in a portion of the San Benito River west and south of Hollister, extending from lower Tres Pinos Creek west to State Highway 101 in central San Benito County.

Sector F - Two elongated deposits located near the community of Aromas in western San Benito County, extending from State Highway 101 northwesterly to Pajaro Gap on Highway 129, a distance of approximately five miles.

Sector G - The Natividad Quarry which consists of marble and dolomite located north of Salinas in Monterey County.

Sector H - Sand deposits in two separate but adjacent parcels located along the southern portion of Monterey Bay, north of the City of Marina.

Sector I - A large sand dune area located on the northern edge of the City of Marina in Monterey County.

Sector J - Quartz diorite located on Huckleberry Hill on the west side of the City of Monterey in Monterey County.

Sector K - Stream channel and floodplain deposit consisting of a one mile long portion of the lower Carmel River east of Highway 1 and south of the City of Carmel in Monterey County.

Sector L - Consists of quartz diorite and siltstone located on upper Soquel Creek on the east side of Sugarloaf Mountain in Santa Cruz County.

Sector M - Fluvial sand and gravel deposit located on Freedom Boulevard approximately seven miles northwest of Watsonville in southern Santa Cruz County.

Sector N - Alluvial deposit located at the confluence of Chalone Creek with the Salinas River in southern Monterey County, approximately three miles southwest of the community of Greenfield, northeast of the Southern Pacific Railroad tracks.

Sector O - Alluvial deposit consisting of two separate but adjacent parcels located at the confluence of Chalone Creek with the Salinas River in southern Monterey County, approximately three miles southwest of the community of Greenfield.

Sector P - Stream channel and floodplain deposits of San Lorenzo Creek located in the foothills of the Gabilan Range in southern Monterey County, approximately six miles northwest of King City.

Sector U - Stream channel and floodplain deposits located in three parcels along upper Pacheco Creek near Bells Station in southeastern Santa Clara County.

NOTE: Authority Cited: Section 2790, Public Resources Code.  
Reference: Sections 2726, 2761-63, and 2790-92, Public Resources Code.

0083M





DESIGNATION OF REGIONALLY SIGNIFICANT CONSTRUCTION  
AGGREGATE RESOURCE AREAS IN THE SOUTH SAN FRANCISCO  
BAY, NORTH SAN FRANCISCO BAY, MONTEREY BAY  
PRODUCTION-CONSUMPTION REGIONS

SMARA DESIGNATION REPORT NO. 7  
JANUARY 1987