THE MINERAL INDUSTRY OF CALIFORNIA

This chapter has been prepared under a Memorandum of Understanding between the U.S. Geological Survey and the California Department of Conservation, Division of Mines and Geology, for collecting information on all nonfuel minerals.

In 2000, the estimated value[1] of nonfuel mineral production for California was $3.35 billion, based upon preliminary U.S. Geological Survey (USGS) data. This was a 1% increase from that of 1999[2] and followed a 10.7% increase in 1999 from 1998. The State continued to lead the Nation in total nonfuel mineral production value, of which California accounted for more than 8% of the U.S. total.

Industrial minerals accounted for more than 95% of California's nonfuel mineral value; the remaining value mostly resulted from the mining of gold and silver. Construction sand and gravel, portland cement, boron minerals, and crushed stone, in descending order of value, were the leading industrial minerals in 2000, accounting for nearly 83% of the State's total industrial mineral value. Most of the State's nonfuel mineral commodities increased in value, led by a $103 million increase in construction sand and gravel, a estimated $48 million rise in portland cement, and a $15 million increase in crushed stone. These were followed by masonry cement, up about $2.1 million (estimated), and pumice and gypsum, up about $1.5 million each. The only substantial decreases were those of boron and soda ash, down $132 million and $7 million, respectively, followed by gold and feldspar, down about $2 million each; and diatomite, down a little more than $1 million. All other changes were in the range of $0.5 million or less. In 1999, substantial increases occurred in the values of boron (up $144 million), construction sand and gravel (up $96 million), portland cement (up an estimated $71 million), crushed stone (up $44 million), and salt (up about $11 million). Smaller yet significant increases occurred in common clay, industrial sand and gravel, and feldspar (in descending order of change). The largest decreases were those of gold, down $20 million; soda ash, down about $7 million; and magnesium compounds, down about $5 million. There were smaller yet significant drops in the values of lime, diatomite, gypsum, masonry cement, and fuller's earth (in descending order of change). All other changes in value were on the order of $1 million or less (table 1).

Based upon USGS estimates of the quantities produced in the United States during 2000, California continued as the Nation's only State to produce boron, rare-earth metal concentrates, and asbestos (in descending order of value). The State remained first in the production of construction sand and gravel and portland cement and first among four States that produced diatomite. California continued to be second of two States that produced soda ash; second in masonry cement, magnesium compounds, and pumice and pumicite, and second of two pyrophyllite-producing States; third in industrial sand and gravel and feldspar; fourth in kaolin; fifth in perlite and seventh of seven States that produce zeolites; and eighth in bentonite. While the State remained 10th in salt, it decreased to 3d from 2d in gold, to 5th from 4th in gemstones and fire clays, and to 6th from 5th in fuller's earth. Additionally, significant quantities of crushed stone, common clay, and dimension stone were produced in the State.

The following narrative information was provided by the California Department of Conservation, Division of Mines and Geology (DMG).[3] There were about 1,000 active mines producing nonfuel minerals in the State. Approximately 11,100 people were employed at these mines and their processing plants.

Newmont Gold Co.'s Mesquite Mine (Imperial County) continued to lead the State in gold production for the year. Homestake Mining Co.'s McLaughlin Mine (Napa and Yolo Counties) was the second largest gold producer in the State followed by Viceroy Gold Corp.'s Castle Mountain Mine (San Bernardino County).

Newmont Gold ceased mining at the Mesquite Mine in the fall. Approximately 93 metric tons (t) of gold has been produced from the mine since production began in 1986. Residual heap leaching will continue into 2003.

The U.S. Bureau of Land Management (BLM) rejected the proposed Glamis Corp's Imperial gold mine project (Imperial County) in a November final environmental impact statement (EIS). The BLM reported that the project would cause significant adverse impacts to Native American archeological and cultural resources. Glamis has spent about $14.2 million on the mine project since the permitting process began in 1996.

Other metallic minerals produced in the State include silver and iron. All of the iron ore produced in 2000 was used in the production of portland cement. All silver produced was a byproduct of gold production.

West Coast Aggregate's Freeman Quarry (Santa Clara County) began mining operations in July. Construction of a permanent plant site is expected to begin in the summer of 2002.

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[1] The terms "nonfuel mineral production" and related "values" encompass variations in meaning, depending upon the minerals or mineral products. Production may be measured by mine shipments, mineral commodity sales, or marketable production (including consumption by producers) as is applicable to the individual mineral commodity.

All 2000 USGS mineral production data published in this chapter are preliminary estimates as of July 2001 and are expected to change. For some mineral commodities, such as construction sand and gravel, crushed stone, and portland cement, estimates are updated periodically. To obtain the most current information, please contact the appropriate USGS mineral commodity specialist. A telephone listing for the specialists may be retrieved over the Internet at URL http://minerals.usgs.gov/minerals/contacts/comdir.html, by using MINES FaxBack at (703) 648-4999 from a fax machine with a touch-tone handset (request Document #1000 for a telephone listing of all mineral commodity specialists), or by calling USGS information at (703) 648-4000 for the specialist's name and number. All Mineral Industry Surveys—mineral commodity, State, and country—also may be retrieved over the Internet at URL http://minerals.usgs.gov/minerals; facsimile copies may be obtained from MINES FaxBack.

[2] Values, percentage calculations, and rankings for 1999 may vary from the Minerals Yearbook, Area Reports: Domestic 1999, Volume II, owing to the revision of preliminary 1999 to final 1999 data. Data for 2000 are preliminary and are expected to change; related rankings may also be subject to change.

[3] Susan Kohler, Associate Geologist, authored the text of information submitted by the Division of Mines and Geology.

Teichert Aggregates continued its permitting process for the Lincoln project, a 290-hectare (ha) aggregate site about 6 kilometers (km) north of the town of Lincoln (Placer County). The project calls for the extraction of 34 million metric tons (Mt) of construction alluvial sand and gravel and 111 Mt of crushed granite aggregate over a period of 85 years. Completion of the final EIS is expected in the summer of 2001.

Teichert Aggregates and Granite Construction Co. received mining permits to extract sand and gravel from the ancestral American River (Sacramento County). Teichert Aggregates' Aspen V South 111-ha site was permitted in January, and Granite Construction Co.'s 164-ha Vineyard site was permitted in February.

CEMEX, Inc. purchased Southdown, Inc. in November for $2.6 billion. The acquisition included Southdown, Inc.'s Victorville cement plant; the Black Mountain, White Mountain, and Alvic limestone quarries in Apple Valley (San Bernardino County); the Quartzite Mountain silica deposit near Victorville (San Bernardino County); the Transit Mixed Azusa sand and gravel mine (Los Angeles County); and the Transit Mixed Concrete Moorpark sand and gravel mine (Ventura County). CEMEX's newly acquired Victorville cement plant is currently undergoing a 900,000-metric-ton-per-year (t/yr) plant expansion that will raise the plant capacity to 2.9 million metric tons per year. The expansion is expected to be completed in the fall of 2001.

CEMEX, the new owner of Transit Mix Concrete Co., a division of Southdown, Inc., continued its permitting process for the proposed Soledad Canyon sand and gravel mining project (Los Angeles County). If approved, approximately 51 Mt of construction-grade aggregate material will be mined from a 190-ha site during a period of 20 years. The project will also include a concrete batch plant.

CEMEX opened a new cement terminal in Sacramento in June. The facility has a storage capacity of 7,000 t. This state-of-the-art facility features automatic and dust-free loading technology. Cement is transported by rail more than 640 km from CEMEX's Victorville Plant in San Bernardino County.

Robertson's Ready Mix Concrete, Inc. was awarded the contract to excavate three pits for the county-owned Mid-Valley Sanitary Landfill expansion in the city of Rialto (San Bernardino County). The excavated material is sand and gravel that will be processed on-site and sold for construction-grade aggregate. The landfill expansion will provide an estimated 70 to 90 Mt of aggregate reserves to the San Bernardino area during the 25-to 35-year life of the landfill.

Molycorp Inc.'s world-class Mountain Pass rare-earths mine (San Bernardino County) received a temporary permit to mine bastnasite ore for a 3-month period starting in December 1999. The mined ore kept the plant in operation in a limited capacity through the year 2000. Molycorp was in the process of obtaining a permit to expand their operation, which will include an enlargement of the current pit and an on-site tailings pond. The Mountain Pass Mine is the only producer of rare earths in the United States.

Calaveras Materials Inc.'s Woolstenhulme Ranch sand and gravel project (Merced County) was granted a permit in November to mine 13 Mt of aggregate during a period of 25 to 30 years. The material will be processed at Calaveras Materials' River Rock Plant near Snelling. Mining began at the site in March 2001.

United Metro Materials, Inc. acquired Solano Concrete Co., Inc. The purchase included a 900,000-t/yr sand and gravel mine (Yolo County), an asphalt plant, and two ready-mix plants in northern California.

In other name changes, Vulcan Materials Co.'s CalMat Division officially changed its name to Vulcan Western Division. Vulcan Materials acquired CalMat in January 1999. RMC Lonestar, Inc. changed its name to RMC Pacific Materials Inc. Rheox, Inc., owner of the Hectorite Mine (San Bernardino County), officially changed its name to Elementis Specialties Inc. in July. Rheox was acquired by Elementis in January 1998. The Hectorite Mine is believed to contain the world's largest commercial deposit of hectorite clay.

The Weber Creek rock quarry (El Dorado County) was ordered by the county to stop operations in June. The order came after a very long controversial legal battle among local government, State government, and private industry concerning the enforcement of the Surface Mining and Reclamation Act (SMARA).

Avocet Tungsten, Inc.'s Pine Creek Mine (Inyo County) shut down production in March and sold its plant and equipment in July. The company cited competition from foreign sources as the main reason for its closure. No mining has taken place since the mine closed in 1990.

On July 20th, the California Air Resources Board (CARB) eliminated the use of any ultramafic rock containing detectable (0.25%) asbestos for road surfacing and landscaping. The measure came after the U.S. Environmental Protection Agency found high levels of asbestos in the air around gravel roads in El Dorado and Calaveras Counties. CARB initiated a similar measure in 1990, limiting the asbestos content in surfacing rock to 5%. Asbestos-containing rock can still be used for nonsurface applications such as riprap, road base, and drain rock.

California's aggregate demand is expected to increase considerably with Governor Davis' Traffic Congestion Relief Plan, a plan announced in April that will fund nearly 100 high-priority transportation projects throughout the State at a total cost of $5.3 billion. The anticipated increase in aggregate demand has sparked an aggregate rush throughout the State, particularly in the Los Angeles and San Francisco Bay regions where about 70% of the funds will be allocated.

Siting and permitting mine operations throughout the State continue to be locally controversial. The leading issues include intense land-use competition, wide ranging environmental concerns, surface water and ground water issues, as well as noise, dust, and truck traffic in populated areas. DMG's Mineral Land Classification Project (a mandate of SMARA) continued to provide lead agencies with mineral resource maps that have proved to be of great value to them in land-use planning and mineral conservation. In 2000, DMG completed Mineral Land Classification reports of mineral resources in El Dorado, Kern, and Tehama Counties. During 2000, classification projects were ongoing in Lassen, Solano, Napa, Sonoma, Marin, and San Bernardino Counties. In addition to the ongoing classification projects, DMG has been developing a statewide aggregate resource and demand map. The map should be available in the summer of 2001.

TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN CALIFORNIA 1/ 2/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral		1998		1999		2000 p/	
		Quantity	Value	Quantity	Value	Quantity	Value
Asbestos	metric tons	5,760	W	7,190	W	5,440	W
Boron minerals		1,170	486,000	1,220	630,000	1,120	498,000
Cement:							
Masonry		410	39,600 e/	466	38,300 e/	490	40,400 e/
Portland		10,000	746,000 e/	10,300	817,000 e/	11,000	865,000 e/
Clays:							
Bentonite		29	2,700	23	2,110	23	2,260
Common		918	9,610	829	13,100	829	13,100
Gemstones		NA	1,810	NA	1,100	NA	1,290
Gold 3/	kilograms	18,700	177,000	17,500	157,000	17,200	155,000
Lime		185	18,100	W	W	W	W
Rare-earth metal concentrates e/	metric tons	5,000	14,400	5,000	14,400	5,000	14,400
Sand and gravel:							
Construction		135,000	801,000	145,000	897,000	157,000	1,000,000
Industrial		1,740	40,400	1,790	43,700	1,810	43,900
Silver 3/	metric tons	11	1,860	8	1,290	9	1,500
Stone:							
Crushed		55,100	344,000	60,300	388,000	61,000	403,000
Dimension	metric tons	28,500	4,710	29,400	4,930	33,900	5,360
Zeolites	do.	(4/)	NA	(4/)	NA	(4/)	NA
Combined values of clays (fire, fuller's earth, kaolin), diatomite, feldspar, gypsum (crude), iron ore (usable), magnesium compounds, perlite, pumice and pumicite, pyrophyllite (1999-2000), salt, soda ash, sodium sulfate [natural, (1998)], talc, titanium [ilmenite, (1998)], and values indicated by symbol W		XX	318,000	XX	310,000	XX	305,000
Total		XX	3,000,000	XX	3,320,000	XX	3,350,000

e/ Estimated. p/ Preliminary. NA Not available. W Withheld to avoid disclosing company proprietary data; value included with "Combined values" data.
XX Not applicable.
1/ Production as measured by mine shipments, sales, or marketable production (including consumption by producers).
2/ Data are rounded to no more than three significant digits; may not add to totals shown.
3/ Recoverable content of ores, etc.
4/ Withheld to avoid disclosing company proprietary data.

TABLE 2
CALIFORNIA: CRUSHED STONE SOLD OR USED, BY KIND 1/

Kind	1998				1999			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone 2/	31 r/	24,900 r/	$150,000 r/	$6.02 r/	33	26,500	$148,000	$5.59
Dolomite	7 r/	297 r/	1,310 r/	4.39 r/	5	356	2,510	7.05
Granite	25 r/	11,000 r/	53,300 r/	4.82 r/	25	12,900	82,900	6.42
Marble	2	W	W	8.27	1	W	W	7.00
Sandstone and quartzite	13 r/	2,810	25,900	9.23	14	3,120	31,200	10.03
Shell	1	W	W	7.86	1	W	W	7.74
Traprock	19 r/	8,990 r/	70,700 r/	7.87 r/	19	12,100	89,000	7.32
Slate	3	W	W	21.50 r/	4	W	W	7.92
Volcanic cinder and scoria	10	538	3,370	6.26	8	221	2,270	10.26
Miscellaneous stone	31 r/	6,100 r/	35,500 r/	5.82 r/	49	4,640	29,100	6.28
Total or average	XX	55,100	344,000	6.24	XX	60,300	388,000	6.44

r/ Revised. W Withheld to avoid disclosing company proprietary data; included in "Total." XX Not applicable.
1/ Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.
2/ Includes limestone-dolomite reported with no distinction between the two.

TABLE 3
CALIFORNIA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 1999, BY USE 1/ 2/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Construction:			
Coarse aggregate (+11/2 inch):			
Riprap and jetty stone	1,190	$12,900	$10.87
Filter stone	470	3,060	6.51
Other coarse aggregate	18	150	8.33
Total or average	1,680	16,200	9.63
Coarse aggregate, graded:			
Concrete aggregate, coarse	2,220	17,900	8.05
Bituminous aggregate, coarse	3,160	23,800	7.51
Bituminous surface-treatment aggregate	648	10,600	16.39
Railroad ballast	2,350	16,400	6.99
Other graded coarse aggregate	1,900	81,300	7.91
Total or average	10,300	81,300	7.91
Fine aggregate (-3/8 inch):			
Stone sand, concrete	209	1,620	7.75
Stone sand, bituminous mix or seal	882	6,360	7.21
Screening, undesignated	796	3,790	4.76
Other fine aggregate	359	2,040	5.67
Total or average	2,250	13,800	6.15
Coarse and fine aggregates:			
Graded road base or subbase	6,680	43,700	6.53
Unpaved road surfacing	518	3,620	6.98
Terrazzo and exposed aggregate	147	1,640	11.18
Crusher run or fill or waste	1,860	8,810	4.74
Other coarse and fine aggregates	845	5,000	5.91
Total or average	10,000	62,700	6.24
Other construction materials	1,750	15,800	9.02
Agricultural:			
Agricultural limestone	W	W	10.49
Poultry grit and mineral food	W	W	6.14
Other agricultural uses	W	W	4.55
Total or average	288	2,520	8.75
Chemical and metallurgical:			
Cement manufacture	9,530	51,800	5.44
Lime manufacture	128	492	3.84
Total or average	9,660	52,300	5.42
Other miscellaneous uses:			
Flour (slate)	W	W	48.70
Other specified uses not listed	W	W	19.01
Total or average	467	9,440	20.20
Unspecified: 3/			
Reported	6,240	35,100	5.62
Estimated	18,000	99,000	5.62
Total or average	23,900	134,000	5.62
Grand total or average	60,300	388,000	6.44

W Withheld to avoid disclosing company proprietary data; included in "Total."
1/ Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.
2/ Includes dolomite, granite, limestone, limestone-dolomite, marble, miscellaneous stone, sandstone and quartzite, shell, slate, traprock, and volcanic cinder and scoria.
3/ Reported and estimated production without a breakdown by end use.

TABLE 4
CALIFORNIA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 1999, BY USE AND DISTRICT 1/

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3		District 4		District 5	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Construction:										
Coarse aggregate (+1 1/2 inch) 2/	W	W	W	W	280	4,330	615	5,280	188	1,410
Coarse aggregate, graded 3/	W	W	W	W	W	W	W	W	W	W
Fine aggregate (-3/8 inch) 4/	--	--	W	W	W	W	W	W	W	W
Coarse and fine aggregate 5/	W	W	W	W	1,370	10,400	W	W	607	3,840
Other construction materials	W	W	--	--	W	W	W	W	W	W
Agricultural 6/	--	--	W	W	--	--	--	--	W	W
Chemical and metallurgical 7/	W	W	W	W	--	--	--	--	W	W
Other miscellaneous uses 8/	--	--	--	--	W	W	--	--	W	W
Unspecified: 9/										
Reported	9	52	1	1	--	--	--	--	2	10
Estimated	210	1,200	160	980	630	3600	64	370	980	5,400
Total	495	2,380	1,760	7,570	3,620	32,300	6,870	49,000	2,200	15,000

	District 6		District 7		District 8		District 9		District 10	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Construction:										
Coarse aggregate (+1 1/2 inch) 2/	W	W	112	1,460	W	W	57	513	W	W
Coarse aggregate, graded 3/	W	W	W	W	W	W	W	W	W	W
Fine aggregate (-3/8 inch) 4/	W	W	W	W	W	W	W	W	--	--
Coarse and fine aggregate 5/	1,260	7,400	2,540	16,400	W	W	W	W	W	W
Other construction materials	W	W	W	W	--	--	W	W	--	--
Agricultural 6/	W	W	W	W	--	--	--	--	W	W
Chemical and metallurgical 7/	--	--	W	W	W	W	W	W	--	--
Other miscellaneous uses 8/	W	W	--	--	W	W	W	W	--	--
Unspecified: 9/										
Reported	1,200	7,140	2,530	14,100	24	134	1,440	7,950	167	920
Estimated	870	4,600	550	3,100	3,900	22,000	9,100	51,000	--	--
Total	4,490	35,700	10,200	71,900	6,440	37,600	17,700	98,100	615	3,840

	District 11		District 12		Unspecified districts	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1 1/2 inch) 2/	W	W	W	W	--	--
Coarse aggregate, graded 3/	W	W	W	W	--	--
Fine aggregate (-3/8 inch) 4/	W	W	W	W	--	--
Coarse and fine aggregate 5/	W	W	W	W	--	--
Other construction materials	--	--	--	--	--	--
Agricultural 6/	--	--	--	--	--	--
Chemical and metallurgical 7/	--	--	--	--	--	--
Other miscellaneous uses 8/	--	--	--	--	--	--
Unspecified: 9/						
Reported	806	4,450	--	--	51	282
Estimated	670	3,800	520	3,000	--	--
Total	3,260	18,900	2,550	15,600	51	282

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Includes filter stone, riprap and jetty stone, and other coarse aggregate.

3/ Includes bituminous aggregate (coarse), bituminous surface-treatment aggregate, concrete aggregate (coarse), railroad ballast, and other graded coarse aggregate.

4/ Includes screening (undesignated), stone sand (bituminous mix or seal), stone sand (concrete), and other fine aggregate.

5/ Includes crusher run (select material or fill), graded road base or subbase, terrazzo and exposed aggregates, unpaved road surfacing, and other coarse and fine aggregates.

6/ Includes agricultural limestone, poultry grit and mineral food, and other agricultural uses.

7/ Includes cement manufacture and lime manufacture.

8/ Includes flour (slate) and other specified uses not listed.

9/ Reported and estimated production without a breakdown by end use.

TABLE 5
CALIFORNIA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1999,
BY MAJOR USE CATEGORY 1/

Use	Quantity (thousand metric tons)	Value (thousand	Unit value
Concrete aggregate (including concrete sand)	35,200	$243,000	$6.90
Plaster and gunite sands	4,380	29,600	6.76
Concrete products (blocks, bricks, pipe, decorative, etc.)	1,340	10,200	7.58
Asphaltic concrete aggregates and other bituminous mixtures	20,100	141,000	7.01
Road base and coverings 2/	17,300	95,100	5.51
Fill	6,390	31,900	4.99
Snow and ice control	78	205	2.63
Railroad ballast	73	465	6.37
Other miscellaneous uses 3/	2,130	15,400	7.20
Unspecified: 4/			
Reported	36,600	208,000	5.69
Estimated	21,000	120,000	5.71
Total or average	145,000	897,000	6.20

1/ Data are rounded to no more than three significant digits; may not add to totals shown.
2/ Includes road and other stabilization (cement and lime).
3/ Includes roofing granules.
4/ Reported and estimated production without a breakdown by end use.

TABLE 6
CALIFORNIA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1999,
BY USE AND DISTRICT 1/

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate (including concrete sand)	475	3,780	161	962	824	8,260
Concrete products (blocks, bricks, pipe, decorative, etc.) 2/	17	102	W	W	W	W
Asphaltic concrete aggregates and other bituminous mixtures	581	4,540	W	W	W	W
Road base materials 3/	253	1,990	837	4,110	425	3,150
Fill	93	635	38	209	106	805
Other miscellaneous uses 4/	35	107	20	132	427	3,440
Unspecified: 5/						
Reported	55	91	23	75	1,060	10,100
Estimated	490	3,700	1,000	5,800	--	--
Total	2,000	14,900	2,340	13,100	3,040	27,700
	District 4		District 5		District 6	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate (including concrete sand)	6,130	40,900	746	5,180	W	W
Concrete products (blocks, bricks, pipe, decorative, etc.) 2/	2,170	15,900	273	2,240	--	--
Asphaltic concrete aggregates and other bituminous mixtures	5,250	42,400	W	W	W	W
Road base materials 3/	6,110	34,300	W	W	W	W
Fill	498	1,720	310	1,720	1,750	12,400
Other miscellaneous uses 4/	145	990	52	498	--	--
Unspecified: 5/						
Reported	2,080	12,000	101	915	1,640	14,300
Estimated	2,900	19,000	1,400	9,000	1,600	9,100
Total	25,300	167,000	4,530	31,100	7,150	51,200
	District 7		District 8		District 9	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate (including concrete sand)	1,280	8,480	4,770	30,900	3,590	20,500
Concrete products (blocks, bricks, pipe, decorative, etc.) 2/	W	W	236	1,470	381	1,890
Asphaltic concrete aggregates and other bituminous mixtures	W	W	2,490	20,000	3,480	15,100
Road base materials 3/	W	W	2,500	14,900	2,320	8,010
Fill	169	869	499	2,010	357	793
Other miscellaneous uses 4/	72	415	450	3,210	277	1,360
Unspecified: 5/						
Reported	4,280	29,900	744	5,080	9,570	45,000
Estimated	--	--	930	5,400	7,800	44,000
Total	7,740	50,800	12,600	82,900	27,800	137,000
	District 10		District 11		District 12	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate (including concrete sand)	320	1,500	13,600	98,400	W	W
Concrete products (blocks, bricks, pipe, decorative, etc.) 2/	W	W	1,370	9,600	177	2,920
Asphaltic concrete aggregates and other bituminous mixtures	W	W	4,060	28,600	W	W
Road base materials 3/	153	753	1,950	11,200	1,200	6,600
Fill	281	1,050	1,810	8,370	481	1,260
Other miscellaneous uses 4/	49	81	755	5,820	--	--
Unspecified: 5/						
Reported	115	572	6,090	27,900	9,510	60,000
Estimated	1,400	6,900	1,500	7,400	2,000	12,000
Total	2,730	12,700	31,200	197,000	17,000	110,000

See footnotes at end of table.

TABLE 6—Continued
CALIFORNIA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1999,
BY USE AND DISTRICT 1/

(Thousand metric tons and thousand dollars)

	Unspecified districts	
	Quantity	Value
Concrete aggregate (including concrete sand)	--	--
Concrete products (blocks, bricks, pipe, decorative, etc.) 2/	--	--
Asphaltic concrete aggregates and other bituminous mixtures	--	--
Road base materials 3/	--	--
Fill	--	--
Other miscellaneous uses 4/	--	--
Unspecified: 5/		
Reported	1,310	2,170
Estimated	--	--
Total	1,310	2,170

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.
1/ Data are rounded to no more than three significant digits; may not add to totals shown.
2/ Includes plaster and gunite sands.
3/ Includes road and other stabilization (cement and lime).
4/ Includes railroad ballast, roofing granules, and snow and ice control.
5/ Reported and estimated production without a breakdown by end use.