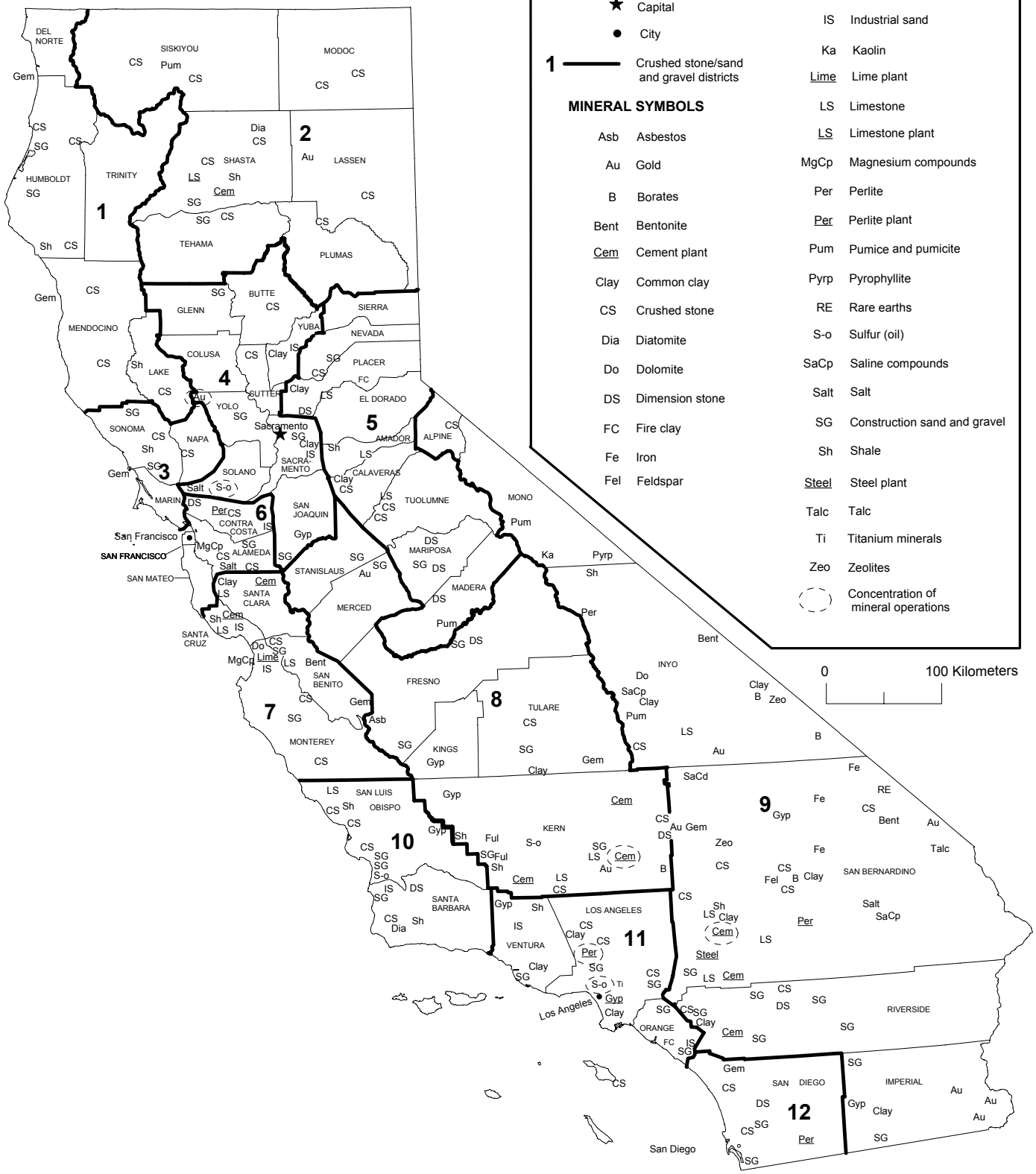
CALIFORNIA



Source: California Department of Conservation, Division of Mines and Geology/U.S. Geological Survey (2001)

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 2001, the estimated value[1] of nonfuel mineral production for California was $3.25 billion, based upon preliminary U.S. Geological Survey (USGS) data. This was less than an 1% decrease from that of 2000[2] and followed a 2.3% decrease in 2000 from 1999. 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 about 95% of California's nonfuel mineral value; the remaining value resulted from the mining of gold and silver. California continued in 2001 as the top construction sand and gravel-producing State, accounting for more than 13% of the commodity's total U.S. mine production, and more than 17% of the Nation's total value for that commodity. Construction sand and gravel was, by value, also the State's leading nonfuel mineral, accounting for more than 29% of the State's total nonfuel mineral production value. Cement (portland and masonry) was the second leading nonfuel mineral, followed by boron minerals and crushed stone; these top four altogether totaled nearly 84% of the State's total industrial mineral value. In 2001, these four mineral commodities had the most influence on the State's nonfuel mineral economy for the year. Increases in the values of crushed stone and construction sand and gravel were smaller than the decreases that occurred in portland cement and gold, resulting in a net decrease for the year (table 1).

In 2000, the most significant increases occurred in construction sand and gravel, up $43 million; rare-earth metal concentrates; masonry cement, up $4.8 million; portland cement, up $4 million; and common clays, up $3.7 million. Increases within the range of $1 million to $2 million occurred in gypsum, industrial sand and gravel, and pumice and pumicite (in descending order of change). But these were more than balanced out by the decreases in the values of boron minerals, down $73 million; gold, down $37 million; salt and crushed stone, down about $11 million each; magnesium compounds; and fuller's earth, down about $6 million. Smaller decreases of about $2 million each occurred in soda ash, feldspar, and diatomite. 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 2001, 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 first among four States that produced diatomite; second among three States that produced soda ash; second in pumice and pumicite and second of two pyrophyllite-producing States; third in gemstones; fourth in fire clays; fifth in magnesium compounds and perlite; sixth in fuller's earth; and ninth in common clays. While California rose in rank to 1st from 2d in masonry cement, to 2d from 3d in feldspar, to 9th from 10th in salt, and to 10th from 11th in crushed stone, it decreased from 1st to 2d in portland cement, from 3d to 4th in gold and in industrial sand and gravel, from 4th to 5th in kaolin, and from 6th to 7th in gypsum. Additionally, significant quantities of dimension stone were produced in the State.

The following narrative information was provided by the California Geological Survey (CGS).[3] There were about 1,000 active mines producing nonfuel minerals in the State. Approximately 9,300 people were employed at these mines and their processing plants.

After 75 years of operation, Hansen Aggregates Mid Pacific, Inc.'s Radum operation in the Pleasanton area (Alameda County) ceased mining in late November 2001. The operation was the largest alluvial sand and gravel producer in northern California with an annual production of about 4 million metric tons (Mt). The Radum Mine and plant produced roughly 25% of the aggregate used in the south San Francisco Bay area. Hansen Aggregates made up a portion of the deficit by shipping aggregate almost 1,000 nautical miles from British Columbia to the San Francisco Bay area. Self-unloading bulk cargo deep-draft vessels hauling up to 64,000 metric tons (t) of aggregate began delivering aggregate in late 2000 after the Port of San Francisco and Hanson Aggregates entered into a 5-year contract to develop a bulk-cargo shipping terminal at the Port's Pier 94.

In addition to the San Francisco Bay area, bulk cargo ships have transported aggregate from British Columbia to San Diego and Long Beach.

The Shasta County Planning Commission approved a permit that would allow expansion for Lehigh Southwest Cement Co.'s (formerly Calaveras Cement Co.) Gray Rock limestone quarry in Shasta County in December 2001. The updated permit

[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 2001 USGS mineral production data published in this chapter are preliminary estimates as of August 2002 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. Specialist contact information may be retrieved over the Internet at URL http://minerals.usgs.gov/minerals/contacts/comdir.html; alternatively, specialists' names and telephone numbers may be obtained by calling USGS information at (703) 648-4000 or by calling the USGS Earth Science Information Center at 1-888-ASK-USGS (275-8747). All Mineral Industry Surveys—mineral commodity, State, and country—also may be retrieved over the Internet at URL http://minerals.usgs.gov/minerals.

[2]Values, percentage calculations, and rankings for 2000 may differ from the Minerals Yearbook, Area Reports: Domestic 2000, Volume II, owing to the revision of preliminary 2000 to final 2000 data. Data for 2001 are preliminary and are expected to change; related rankings may also change.

[3]Susan Kohler, Associate Geologist, authored the text of information submitted by the California Geological Survey.

allowed for an additional 44 Mt of high-quality limestone to be mined during a 50-year period from the existing site that has operated since 1960.

Teichert Aggregates (owned by Teichert Inc.) submitted the final Environmental Impact Report for its Lincoln project, a 290-hectare aggregate site located about 6 kilometers north of the town of Lincoln (Placer County). The project called for the extraction of 34 Mt of construction alluvial sand and gravel and 111 Mt of crushed granite aggregate during a period of 85 years.

Mining commenced in March 2001 at Calaveras Material Inc.'s Woolstenhulme Ranch sand and gravel mine (Merced County). Approximately 14 Mt of aggregate will be mined at the site during a period of about 25 to 30 years. The material will be processed at Calaveras Materials Inc.'s River Rock plant near Snelling (Merced County).

Molycorp Inc. continued its permitting process for an enlargement of the current pit and an onsite tailings pond for its Mountain Pass rare-earths mine (San Bernardino County). Prior to closure of its refining facility in 1998, Molycorp recovered the rare earths cerium, europium, gadolinium, lanthanum, neodymium, praseodymium, and samarium from bastnasite ore mined at its Mountain Pass Mine. In 2000, Molycorp was permitted to mine bastnasite ore, but processing was limited to the recovery of raw and leached bastnasite. The recovery of rare-earths at the separation plant was contingent on the completion of a new onsite tailings impoundment and evaporation pond. Molycorp anticipated having permits for the remodeled processing facility by the end of 2002 and planned to be back in full production by 2004. The Mountain Pass Mine was the only producer of rare-earths in the United States.

Teichert Materials (owned by Teichert Inc.) acquired two mine properties in September 2001, the American River Aggregates property in Sacramento County and the Cool Cave Quarry in El Dorado County. The American River Aggregates property will be renamed as two separate facilities: Teichert Grantline Plant and Teichert Prairie City Sand Plant. The Cool Cave Quarry was purchased from Spreckles Limestone Products, which mined high-quality limestone to supply lime for its sugar plants in Woodland (Yolo County) and Tracy (San Joaquin County). Base rock and riprap were also produced at the quarry. Teichert Materials planned to continue aggregate production at the quarry and also to pursue other markets for the high-grade limestone.

CEMEX, Inc.'s Victorville cement plant (San Bernardino County) completed a 900,000-metric-ton-per-year plant expansion, increasing the plant capacity to 2.9 million metric tons per year.

The CGS reported gold production continued to decline during the year with a total of 14 t produced at a total value of $122 million. The USGS preliminary figure from table 1 was somewhat higher at 15 t valued at $137 million. In the next 2 to 3 years, the CGS expects California's gold production to continue to drop.

Silver production made up less than 1% of the total value of California's metal production. All of the silver produced in California is a byproduct of gold production. Iron was produced and used in the production of portland cement and was included in the industrial mineral category.

Homestake's McLaughlin Mine (Napa, Lake, and Yolo Counties) ranked number one in California gold production in 2001. The McLaughlin Mine has been operating since 1985 and was California's largest producer of gold from 1985 to 1995. Mining operations ceased at the McLaughlin Mine in 1996, but gold processing was expected to continue through May 2002. Barrick Gold Corp. acquired Homestake Mining Co. for $2.2 billion in December 2001.

Canyon Resources Corp.'s Briggs Mine (Inyo County) was the second largest gold producer in the State in 2001. Newmont's Mesquite Mine (Imperial County), which ranked number one in gold production from 1996 through 2000, ranked number three in 2001. Although the Mesquite Mine ceased mining in the fall of 2000, leaching of gold was expected to continue into 2003.

California's fourth largest gold producer, Viceroy Gold's and MK Gold's Castle Mountain Mine (San Bernardino County) ceased mining in May 2001. The mine produced about 36 t of gold during its 10 years of operation. Heap leaching will continue at the mine until 2003 or 2004, and reclamation was expected to be completed by 2004.

Initially, the Federal Government denied Glamis Gold Ltd.'s Imperial gold project (Imperial County) in January 2001, but the denial was later rescinded in October 2001, allowing Glamis to continue the permitting process. Glamis Gold Ltd. commenced final reclamation on its heap-leaching facility at the Picacho Mine (Imperial County), and final reclamation was completed in March 2002. The historic Picacho Mine had been reopened as an open pit heap-leach operation by Glamis Gold in 1981 and was mined up until 1998. Gold production ceased in 2000. Glamis Gold produced 10.5 t of gold from the Picacho Mine during its 20 years of operation.

Lassen Gold Mining Inc. completed heap leaching in September 2001 at its Hayden Hill gold mine (Lassen County). Mining ceased at the mine in December 1997. The mine produced more than 15.6 t of gold since production began in 1992.

An amendment (adopted in July 2000) by the California Air Resources Board (CARB) prohibited the sale or use of aggregate derived from serpentinite or ultramafic rock for unpaved roads unless it has been tested and found to have an asbestos content that is less than 0.25%. The amendment went into effect on November 13, 2001.

In January 2002, the name of the Division of Mines and Geology was changed to the California Geological Survey (CGS). CGS comprised several programs including Mineral Resources and Mineral Hazards Mapping, Seismic Hazards Mapping, Strong Motion Instrumentation, Regional Geologic and Hazards Mapping, Timber Harvest Enforcement and Watershed Restoration, and North Coast Watershed Assessment. Consequently, the new name change better reflects the diverse geologic activities conducted by CGS.

The Department of Conservation's CGS Mineral Land Classification Project, a mandate of the Surface Mining and Reclamation Act, continued to provide lead agencies with mineral resource maps that have proved to be of great value in

land-use planning and mineral resource conservation. In 2001, CGS completed a Mineral Land Classification report in Lassen County and had ongoing projects in Solano, Napa, Sonoma, Marin, San Bernardino, and Riverside Counties. CGS has classified a little more than one-third of the State for mineral resources.

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

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral		1999		2000		2001 p/	
		Quantity	Value	Quantity	Value	Quantity	Value
Asbestos	metric tons	7,190	W	5,260	W	5,440	W
Boron minerals		1,220	630,000	1,070	557,000	1,070	557,000
Cement:							
Masonry		466	38,300 e/	484	43,100 e/	560 e/	49,900 e/
Portland		10,300	817,000 e/	10,900	821,000 e/	10,200 e/	768,000 e/
Clays:							
Bentonite		23	2,110	21	2,160	22	2,090
Common		829	13,100	969	16,800	969	16,800
Gemstones		NA	1,100	NA	1,500	NA	1,240
Gold 3/	kilograms	17,500	192,000	17,200	155,000	15,200	137,000
Rare-earth metal concentrates e/	metric tons	5,000	14,400	5,000	W	W	W
Sand and gravel:							
Construction		145,000	897,000	148,000	940,000	148,000	953,000
Industrial		1,790	43,700	1,810	45,200	1,760	43,900
Silver 3/	metric tons	8	1,290	9	1,390	W	W
Stone:							
Crushed		59,400	384,000	59,700	373,000	61,000	393,000
Dimension	metric tons	29,400	4,930	33,300	5,790	33,000	6,000
Zeolites	do.	(4/)	NA	(4/)	NA	(4/)	NA
Combined values of clays (fire, fuller's earth, kaolin), diatomite, feldspar, gypsum (crude), iron ore [usable (1999)], lime, magnesium compounds, perlite (crude), pumice and pumicite, salt, soda ash, talc [crude (1999)], and values indicated by symbol W		XX	310,000	XX	308,000	XX	321,000
Total		XX	3,350,000	XX	3,270,000	XX	3,250,000

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	1999				2000			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone 2/	32 r/	26,300 r/	$147,000 r/	$5.59	30	29,200	$149,000	$5.12
Dolomite	5	356	2,510	7.05	5	256	2,060	8.05
Granite	23 r/	12,300 r/	79,400 r/	6.46 r/	23	10,400	75,100	7.24
Marble	1	W	W	7.00	2	W	W	7.06
Sandstone and quartzite	16 r/	3,240 r/	32,100 r/	9.89 r/	16	3,400	29,300	8.64
Shell	1	W	W	7.74	1	W	W	8.32
Traprock	20 r/	11,600 r/	85,900 r/	7.43 r/	20	10,800	79,000	7.29
Slate	4	W	W	7.92	3	W	W	21.28
Volcanic cinder and scoria	7 r/	182 r/	1,930 r/	10.62 r/	9	185	2,000	10.81
Miscellaneous stone	50 r/	5,070 r/	31,800 r/	6.27 r/	45	5,320	34,500	6.48
Total or average	XX	59,400 r/	384,000 r/	6.46 r/	XX	59,700	373,000	6.26

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 2000, BY USE 1/ 2/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Construction:			
Coarse aggregate (+1 1/2 inch):			
Macadam	W	W	$5.64
Riprap and jetty stone	1,860	$18,300	9.83
Filter stone	295	1,430	4.84
Other coarse aggregate	33	369	11.18
Total or average	2,190	20,100	9.17
Coarse aggregate, graded:			
Concrete aggregate, coarse	3,080	25,300	8.22
Bituminous aggregate, coarse	2,340	19,000	8.12
Bituminous surface-treatment aggregate	W	W	12.53
Railroad ballast	602	4,710	7.82
Other graded coarse aggregate	1,850	16,400	8.84
Total or average	7,870	65,300	8.30
Fine aggregate (-3/8 inch):			
Stone sand, concrete	1,150	9,030	7.82
Stone sand, bituminous mix or seal	424	3,620	8.54
Screening, undesignated	936	5,600	5.98
Other fine aggregate	1,080	9,370	8.64
Total or average	3,600	27,600	7.67
Coarse and fine aggregates:			
Graded road base or subbase	4,600	31,000	6.75
Unpaved road surfacing	439	2,260	5.15
Terrazzo and exposed aggregate	38	517	13.61
Crusher run or fill or waste	1,300	7,500	5.78
Roofing granules	W	W	8.78
Other coarse and fine aggregates	1,220	9,570	7.86
Total or average	7,590	50,900	6.71
Other construction materials	811	6,280	7.75
Agricultural:			
Agricultural limestone	57	643	11.28
Poultry grit and mineral food	124	1,770	14.31
Other agricultural uses	15	86	5.73
Total or average	196	2,500	12.77
Chemical and metallurgical:			
Cement manufacture	14,800	67,800	4.57
Lime manufacture	(3/)	(3/)	3.71
Glass manufacture	(3/)	(3/)	18.33
Sulfur oxide removal	(3/)	(3/)	15.00
Special:			
Asphalt fillers or extenders	(3/)	(3/)	5.36
Other fillers or extenders	(3/)	(3/)	5.37
Other miscellaneous uses:			
Flour (slate)	(3/)	(3/)	49.57
Other specified uses not listed	1,200	6,910	5.76
Unspecified: 4/			
Reported	4,290	24,500	5.71
Estimated	17,000	98,000	5.86
Total or average	21,100	123,000	5.83
Grand total or average	59,700	373,000	6.26

W Withheld to avoid disclosing company proprietary data; included with "Other."
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/ Withheld to avoid disclosing company proprietary data; included in "Grand total."
4/ Reported and estimated production without a breakdown by end use.

TABLE 4
CALIFORNIA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2000, 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	341	4,930	557	6,010	92	565
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	W	W
Coarse and fine aggregate 5/	278	1,280	W	W	1,000	6,160	W	W	300	1,420
Other construction materials	64	230	--	--	11	118	354	3,430	32	122
Agricultural 6/	--	--	W	W	--	--	--	--	--	--
Chemical and metallurgical 7/	W	W	W	W	--	--	--	--	W	W
Special 8/	--	--	--	--	--	--	--	--	W	W
Other miscellaneous uses 9/	--	--	--	--	W	W	--	--	--	--
Unspecified: 10/										
Reported	(11/)	(11/)	44	248	--	--	62	306	293	1,720
Estimated	100	640	210	1,100	1,100	6,500	24	140	760	4,400
Total	511	2,860	1,630	6,250	3,300	26,300	3,600	29,400	1,580	9,890

	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	90	1,380	W	W	100	527	21	360
Coarse aggregate, graded 3/	W	W	3,320	25,800	W	W	W	W	W	W
Fine aggregate (-3/8 inch) 4/	W	W	1,490	12,300	--	--	W	W	W	W
Coarse and fine aggregate 5/	1,410	9,610	2,010	16,000	--	--	335	1,900	W	W
Other construction materials	26	149	233	1,250	--	--	72	891	19	99
Agricultural 6/	W	W	W	W	--	--	W	W	W	W
Chemical and metallurgical 7/	--	--	W	W	W	W	W	W	W	W
Special 8/	--	--	--	--	--	--	W	W	--	--
Other miscellaneous uses 9/	272	1,280	--	--	W	W	927	5,620	--	--
Unspecified: 10/										
Reported	291	1,690	856	4,960	(11/)	(11/)	1,400	8,100	173	1,000
Estimated	--	--	3,800	23,000	4,400	25,000	5,500	32,000	--	--
Total	3,570	27,300	14,900	99,400	6,800	39,800	18,000	93,500	590	5,930

	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/	W	W	--	--	--	--
Chemical and metallurgical 7/	W	W	--	--	--	--
Special 8/	W	W	--	--	--	--
Other miscellaneous uses 9/	--	--	--	--	--	--
Unspecified: 10/						
Reported	1,170	6,440	--	--	4	23
Estimated	290	1,700	630	3,600	--	--
Total	2,970	18,400	2,160	14,200	4	23

See footnotes at end of table.

TABLE 4--Continued
CALIFORNIA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2000, BY USE AND DISTRICT 1/

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, macadam, 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, roofing granules, terrazzo and exposed aggregate, 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, glass manufacture, lime manufacture, and sulfur oxide removal.
8/ Includes asphalt fillers or extenders and other fillers or extenders.
9/ Includes flour (slate) and other specified uses not listed.
10/ Reported and estimated production without a breakdown by end use.
11/ Less than ½ unit.

TABLE 5
CALIFORNIA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2000,
BY MAJOR USE CATEGORY 1/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate (including concrete sand)	49,000	$337,000	$6.75
Plaster and gunite sands	4,220	25,900	6.14
Concrete products (blocks, bricks, pipe, decorative, etc.)	1,030	8,410	8.17
Asphaltic concrete aggregates and other bituminous mixtures	21,300	148,000	6.95
Road base and coverings	17,400	96,900	5.57
Road stabilization (cement and lime)	173	1,480	8.55
Fill	6,870	36,200	5.27
Snow and ice control	62	546	8.81
Railroad ballast	214	1,440	6.73
Other miscellaneous uses	2,500	18,500	7.40
Unspecified: 2/			
Reported	26,000	142,000	5.46
Estimated	19,000	120,000	6.70
Total or average	148,000	940,000	6.34

1/ Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.
2/ Reported and estimated production without a breakdown by end use.

TABLE 6
CALIFORNIA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2000,
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)	331	2,830	316	1,980	727	6,560
Concrete products (blocks, bricks, pipe, decorative, etc.) 2/	W	W	W	W	W	W
Asphaltic concrete aggregates and other bituminous mixtures	401	5,220	288	2,350	W	W
Road base and coverings 3/	417	3,420	756	3,640	W	W
Fill	77	579	109	259	64	519
Other miscellaneous uses 4/	252	606	121	614	1,010	8,500
Unspecified: 5/						
Reported	312	675	(6/)	(6/)	546	5,370
Estimated	460	3,000	880	5,000	160	1,100
Total	2,250	16,300	2,470	13,900	2,500	22,000

	District 4		District 5		District 6	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate (including concrete sand)	8,250	44,300	689	4,710	3,060	29,900
Concrete products (blocks, bricks, pipe, decorative, etc.) 2/	1,820	7,790	W	W	W	W
Asphaltic concrete aggregates and other bituminous mixtures	4,300	22,900	W	W	1,850	17,100
Road base and coverings 3/	6,050	27,300	1,200	8,680	969	7,490
Fill	759	3,000	85	598	1,840	15,500
Other miscellaneous uses 4/	964	4,460	754	5,440	1	10
Unspecified: 5/						
Reported	594	1,430	679	3,460	4,760	29,000
Estimated	5,600	47,000	1,200	7,300	41	250
Total	28,400	158,000	4,570	30,200	12,500	99,300

	District 7		District 8		District 9	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate (including concrete sand)	1,750	14,000	5,320	36,300	8,570	43,100
Concrete products (blocks, bricks, pipe, decorative, etc.) 2/	W	W	124	898	211	1,300
Asphaltic concrete aggregates and other bituminous mixtures	W	W	2,820	20,500	3,610	19,400
Road base and coverings 3/	W	W	2,340	14,600	2,240	8,690
Fill	370	2,400	279	1,190	264	615
Other miscellaneous uses 4/	2,380	16,500	426	4,080	181	1,210
Unspecified: 5/						
Reported	672	4,270	--	--	9,440	51,100
Estimated	--	--	1,900	12,000	4,500	26,000
Total	5,170	37,200	13,200	89,700	29,000	152,000

	District 10		District 11		District 12	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate (including concrete sand)	223	705	18,600	133,000	2,100	19,500
Concrete products (blocks, bricks, pipe, decorative, etc.) 2/	W	W	1,240	10,300	W	W
Asphaltic concrete aggregates and other bituminous mixtures	W	W	5,230	40,800	W	W
Road base and coverings 3/	378	2,240	1,200	8,980	1,130	7,510
Fill	117	416	2,050	7,870	857	3,200
Other miscellaneous uses 4/	386	2,270	52	471	1,530	14,000
Unspecified: 5/						
Reported	103	666	881	2,490	6,290	40,400
Estimated	530	3,400	1,600	8,600	1,700	10,000
Total	1,740	9,700	30,800	213,000	13,600	95,100

	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 and coverings 3/	276	1,220
Fill	--	--
Other miscellaneous uses 4/	--	--
Unspecified: 5/		
Reported	1,730	2,860
Estimated	--	--
Total	2,010	4,080

See footnotes at end of table.

TABLE 6--Continued
CALIFORNIA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2000,
BY USE AND DISTRICT 1/

W Withheld to avoid disclosing company proprietary data; included with "Other miscellaneous uses." -- 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, and snow and ice control.
5/ Reported and estimated production without a breakdown by end use.
6/ Less than ½ unit.