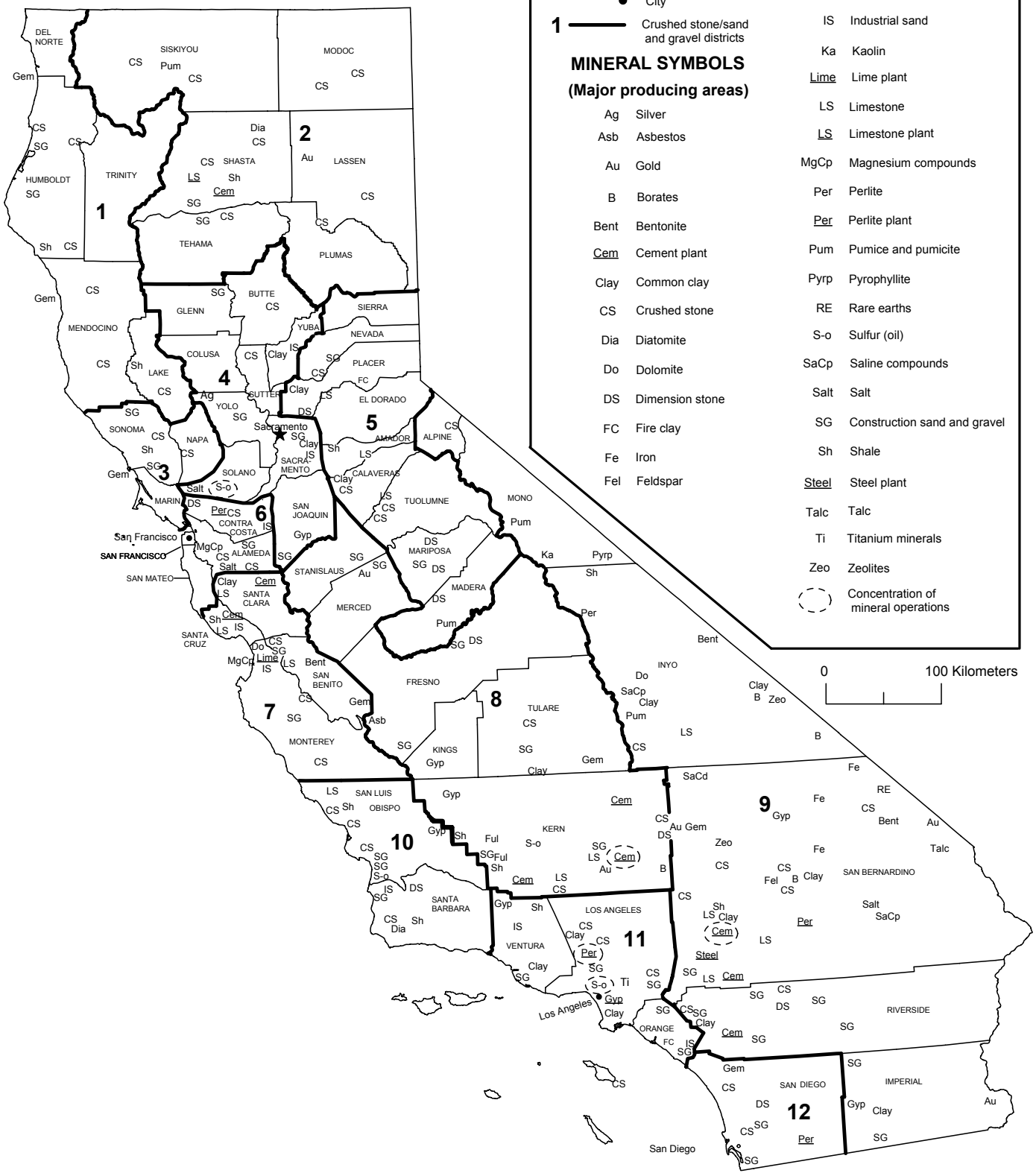
CALIFORNIA



Source: California Department of Conservation, California Geological Survey/U.S. Geological Survey (2002)

THE MINERAL INDUSTRY OF CALIFORNIA

In 2002, the estimated value[1] of nonfuel mineral production for California was $3.44 billion, based upon preliminary U.S. Geological Survey (USGS) data. This was about a 4% increase from that of 2001[2] and followed a 1.2% increase in 2001 from 2000. The State continued to lead the Nation in nonfuel mineral production value, of which California accounted for about 9% of the U.S. total.

Industrial minerals accounted for about 96% of California's nonfuel mineral value; the remaining value resulted from the mining of gold, the rare-earth metal concentrates, silver, and iron ore (descending order of value). California continued in 2002 as the top construction-sand-and-gravel-producing State, accounting for more than 14% of the commodity's total U.S. mine production and more than 20% 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 34% of the State's total nonfuel mineral production value. Cement (portland and masonry) was the second leading nonfuel mineral, followed by boron minerals, crushed stone, and gold; these five accounted for nearly 90% of the State's total industrial mineral value. In 2002, increases in construction sand and gravel, cement, crushed stone, and gypsum (descending order of change) more than offset decreases in boron minerals and gold, resulting in a net increase for the year (table 1).

In 2001, the most substantial increases were in construction sand and gravel, up $142 million (although production increased only slightly); crushed stone, up $36 million; and dimension stone, up about $4 million. Increases of between $1 million and $2 million in asbestos and common clays (in descending order of change) were offset, in part, by decreases in boron minerals, down about $51 million; portland cement, down about $43 million; and gold, down $34 million. Lime and gypsum decreased about $2 million each. 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 2002, 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; third in feldspar and gemstones; fourth in gold and kaolin; fifth in gypsum and magnesium compounds; sixth in perlite; and seventh in fuller's earth. California rose in rank to 1st from 2d in portland cement, to 3d from 4th in industrial sand and gravel, to 4th from 11th in common clay, and to 9th from 10th in crushed stone. While the State was second of two States that produced pyrophyllite, it decreased to second from first in masonry cement; to fourth from third in pumice and pumicite; and to sixth from fifth in zeolites. Additionally, California was a significant producer of dimension stone.

Information and production data in the text that follows were prepared by the California Geological Survey (CGS) based on that agency's data, surveys, and estimates (Kohler, 2003). They may differ from some production figures reported to the USGS.

Commodity Review

Industrial Minerals

Construction Aggregate.—Aggregate imports by barge and ship from Canada and Mexico to California continued to increase in the San Francisco and San Diego bay areas. California imported about 2.2 million metric tons (Mt) of sand and gravel during 2002, compared with 816,000 metric tons (t) in 2001, a 160% increase. Imports to the San Francisco Bay area are expected to increase significantly during the next few years. This is largely because of the closure of Hanson Aggregates Mid Pacific Inc.'s Radum plant (Alameda County) in 2001. The Radum plant produced more than 3.6 million metric tons per year of aggregate.

Mitsubishi Cement Corp. continued permitting an 81 ha expansion at its Cushenbury limestone quarry (San Bernardino County).

RMC Pacific Materials Inc. was granted a permit in November 2002 to mine alluvial sand and gravel at its Stillwell site (Tulare County). The permit will add 6.3 Mt of reserves to the northern Tulare County region and will extend the life of the existing RMC Lemon Cove operation by 4 to 5 years.

RMC Pacific Materials submitted an application to Fresno County to mine 200 Mt of crushed stone at Jessie Morrow Mountain (Fresno County) near Friant.

In February 2002, Transit Mixed Concrete's proposed 186 hectare (ha), 71-Mt reserves Soledad Canyon sand and gravel mining project (Los Angeles County) was denied by the Los Angeles County Board of Supervisors.

Kaweah River Rock Co. applied for a permit to mine 113 ha of land south of its existing operation. If approved, the permit will add an additional 13.6 Mt to 18 Mt of reserves to the northern Tulare County area.

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[1]The terms "nofuel mineral production" and related "values" encompass variations in meaning, depending upon the minerals or mineral products. Produciton 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 2002 USGS mineral production data published in this chapter are preliminary estimates as of July 2003 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 2001 may differ from the Minerals Yearbook, Area Reports: Domestic 2001, Volume II, owing to the revision of preliminary 2001 to final 2001 data. Data for 2002 are preliminary and are expected to change; related rankings may also change.

In March 2002, the Santa Cruz County Board of Supervisors denied RMC Pacific Material's revision to its reclamation plan at its Bonny Doon limestone quarry (Santa Cruz County). The revision proposal was to expand the pit an additional 7.3 ha. RMC was writing an environmental impact revision (EIR) for the expansion.

In May 2002, Granite Construction acquired Parnum Paving. The acquired properties included eight sand and gravel mines in Mendocino, Humboldt, and Del Norte Counties and three crushed stone quarries in Mendocino and Lake Counties. Granite Construction also purchased the Vern Freeman crushed stone quarry (Santa Clara County) from West Coast Aggregates Inc. in November.

Palomar Aggregates Inc.'s proposed Rosemary Mountain crushed-rock-mining operation (San Diego County) was approved by the San Diego County Board of Supervisors in October 2002. The quarry was expected to produce about 910,000 metric tons per year of aggregate for the next 20 years.

Rinker Materials Corp. acquired Kiewit Materials Co. in September 2002 for $540 million. This made Rinker the fifth largest aggregate producer in the United States. The acquisition came almost 2 years after Kiewit purchased Solano Concrete Co., which operated four aggregate properties in Yolo and Solano Counties.

In October 2002, the U.S. Forest Service denied Granite Construction Co.'s proposal to mine 24 ha of land in the Tahoe National Forest (Placer County).

Other Industrial Minerals.—KCAC's Joe Asbestos Mine (San Benito County) closed its mill in May 2002 after mining ceased in 2001. The mine had been in operation since 1963 and was the only producer of asbestos in the United States. The mine produced a short-fiber variety of chrysotile asbestos that was primarily exported to Japan. The United States still imports long-fiber asbestos for use in fire-retardant products, primarily asphalt roof tiles.

Molycorp Inc. continued its permitting process to enlarge the current pit and an onsite tailing pond for its Mountain Pass rare-earth mine (San Bernardino County). A draft EIR was completed in April 2003. Molycorp was permitted to mine a limited quantity of bastnaesite ore in early 2002, but processing was limited to the recovery of raw and leached bastnaesite.

U.S. Borax's Mine and plant at Boron (Kern County) increased its production by 12% and, at the same time, it managed to reduce its water usage by 7% per ton of boric acid produced. The higher productivity was attributed to equipment upgrades and maintenance improvements. The overall price for all boron produced in California decreased by about 25% from that of 2001.

Metals

Gold.—The CGS reported gold production continued to decline during the year with a total of 9.52 t produced at a total value of $95.4 million. The USGS preliminary figure from table 1 was higher at 10.6 t (10,600 kilograms) valued at $103 million. The CGS expects gold production to decrease by 80% between 2002 and 2004.

California had only five major producing gold mines in 2002. These were Barrick Gold Corp.'s McLaughlin Mine (Napa Lake and Yolo Counties), Canyon Resources Corp.'s Briggs Mine (Inyo County), Glamis Rand Mining Co.'s Rand Mine (Kern County), Newmont Mining Corp.'s Mesquite Mine (Imperial County), and Viceroy Gold's Castle Mountain Mine (San Bernardino County). Mining has ended at these mines (except the Briggs Mine) and the last ore processing from heap leaching is expected to take place by the end of 2004.

Barrick's McLaughlin Mine halted gold production in July 2002. About 36 Mt of ore have been milled at the site. Since its first pour in 1985, about 105 t of gold and 70.9 t of silver have been produced. This made the McLaughlin Mine California's richest modern-day gold mine.

Canyon Resources planned to continue mining the Briggs Mine until the fall of 2003. Ore processing from heap leaching was expected to end in 2005.

The Rand Mine led the State in gold production with about 2 t. The Briggs Mine was the State's second largest producer of gold.

Newmont Mining obtained approval to expand and reopen its Mesquite Mine. The approval came after Newmont ended mining operations in May 2001. Newmont was evaluating the economic viability of mining the expansion area, which could yield up to 31 t.

Other Metals.—Silver production made up less than 1% of California' metal production. All of the silver produced in California is a byproduct of gold production.

Government Programs

The 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 proven to be of great value in land-use planning and mineral-resource conservation. To date, CGS has classified a little more than one-third of the State for mineral resources.

In August 2002, CGS released an Aggregate Availability Map of California. The 1:100,000-scale map and the accompanying report compare forecast 50-year demand for construction aggregate to the permitted construction aggregate resources for 32 aggregate resource areas. These areas cover about 25% of the State and supply aggregate to about 90% of California's population. The map also includes aggregate production locations and a pie diagram showing construction aggregate uses and aggregate production areas with less than 10 years of permitted aggregate supply. The accompanying report contains information about the map as well as an overview of construction aggregate resources.

Reference Cited

Kohler, Susan, 2003, California, *in* Annual review 2002: Mining Engineering, v. 55, no. 5, May, p. 56-59.

TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN CALIFORNIA[1, 2]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral		2000		2001		2002[p]	
		Quantity	Value	Quantity	Value	Quantity	Value
Asbestos	metric tons	5,260	W	5,260	W	2,720	W
Boron minerals		1,070	557,000	1,050	506,000	623 [3]	468,000
Cement:							
Masonry		484	43,100 [e]	564	51,400 [e]	490 [e]	45,000 [e]
Portland		10,900	821,000 [e]	10,100	778,000 [e]	11,200 [e]	865,000 [e]
Clays:							
Bentonite		21	2,160	W	W	23	2,460
Common		969	16,800	885	18,300	1,570	17,900
Kaolin		W	W	W	W	74	3,400
Gemstones		NA	1,500	NA	1,280	NA	5,310
Gold[4]	kilograms	17,200	155,000	13,800	121,000	10,600	103,000
Rare-earth metal concentrates [e]	metric tons	5,000	W	5,000	27,600	5,000	27,600
Sand and gravel:							
Construction		148,000	940,000	149,000	1,082,000	159,000	1,180,000
Industrial		1,810	45,200	1,840	47,700	1,840	47,700
Silver[4]	metric tons	8 [r]	1,350 [r]	8	1,070	4	588
Stone:							
Crushed		57,900 [r]	360,000 [r]	61,600	396,000	63,500	420,000
Dimension	metric tons	33,300	5,790	40,200	9,540	41,200	10,100
Zeolites	do.	(5)	NA	(5)	NA	(5)	NA
Combined values of clays [fire (2000-01), fuller's earth, kaolin (2000-01)], diatomite, feldspar, gypsum (crude), iron ore [usable (2001-02)], lime, magnesium compounds, perlite (crude), pumice and pumicite, pyrophyllite (crude), salt, soda ash, and values indicated by symbol W		XX	308,000	XX	256,000	XX	246,000
Total		XX	3,260,000 [r]	XX	3,300,000	XX	3,440,000

[e]Estimated. [p]Preliminary. [r]Revised. 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]Reported as B_2O_3; may not be comparable to prior years data.

[4]Recoverable content of ores, etc.

[5]Withheld to avoid disclosing company proprietary data.

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

Kind	2000				2001			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone[2]	28 [r]	28,000 [r]	$143,000	$5.09 [r]	32	27,700	$143,000	$5.18
Dolomite	5	256	2,060	8.05	5	234	1,770	7.57
Marble	2	W	W	7.06	2	W	W	7.96
Shell	1	W	W	8.32	1	W	W	5.61
Granite	23	10,700 [r]	76,800 [r]	7.20 [r]	22	13,100	90,300	6.91
Traprock	20	10,800	79,000	7.29	21	12,400	93,400	7.50
Sandstone and quartzite	14 [r]	2,980 [r]	24,200 [r]	8.12 [r]	14	3,490	32,400	9.29
Slate	3	W [r]	W	21.28	2	W	W	21.27
Volcanic cinder and scoria	9	185 [r]	2,000	10.81	7	198	1,670	8.43
Miscellaneous stone	45	4,820 [r]	31,600 [r]	6.56 [r]	40	4,330	31,200	7.21
Total or average	XX	57,900 [r]	360,000 [r]	6.22 [r]	XX	61,600	396,000	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 values; 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 2001, BY USE[1]

Use	Quanity (thousand metric tons)	Value (thousands)	Unit value
Construction:			
Coarse aggregate (+1 1/2 inch):			
Riprap and jetty stone	960	$9,000	$9.38
Filter stone	168	1,950	11.59
Other coarse aggregates	743	6,170	8.30
Total or average	1,870	17,100	9.15
Coarse aggregate, graded:			
Concrete aggregate, coarse	2,660	22,700	8.56
Bituminous aggregate, coarse	2,500	20,300	8.15
Bituminous surface-treatment aggregate	141	1,280	9.12
Railroad ballast	785	6,920	8.82
Other graded coarse aggregates	1,330	13,100	9.83
Total or average	7,410	64,300	8.69
Fine aggregate (-3/8 inch):			
Stone sand, concrete	654	5,130	7.84
Stone sand, bituminous mix or seal	1,400	11,900	8.52
Screening, undesignated	908	5,370	5.91
Other fine aggregates	1,270	13,300	10.50
Total or average	4,230	35,700	8.45
Coarse and fine aggregates:			
Graded road base or subbase	4,850	34,000	7.00
Unpaved road surfacing	325	2,540	7.81
Terrazzo and exposed aggregate	43	630	14.65
Crusher run or fill or waste	1,960	10,300	5.26
Roofing granules	W	W	9.37
Other coarse and fine aggregates	1,670	14,400	8.62
Total or average	8,850	61,900	6.99
Other construction materials	1,210	10,400	8.64
Agricultural, other agricultural uses	33	481	14.58
Chemical and metallurgical:			
Cement manufacture	13,000	58,700	4.51
Glass manufacture	(2)	(2)	19.29
Sulfur oxide removal	(2)	(2)	16.76
Special, asphalt fillers or extenders	(2)	(2)	19.84
Other miscellaneous uses:			
Flour (slate)	(2)	(2)	49.60
Other specified uses not listed	463	3,270	7.06
Unspecified:[3]			
Reported	6,800	39,500	5.82
Estimated	18,000	100,000	5.77
Total or average	24,400	141,000	5.78
Grand total or average	61,600	396,000	6.44

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]Withheld to avoid disclosing company proprietary data; included in "Grand total."

[3]Reported and estimated production without a breakdown by end use.

TABLE 4

CALIFORNIA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2001, 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]	83	687	63	331	W	W	W	W	33	210
Coarse aggregate, graded[3]	W	W	14	88	W	W	W	W	W	W
Fine aggregate (-3/8 inch)[4]	W	W	18	89	W	W	W	W	W	W
Coarse and fine aggregate[5]	250	1,420	15	77	921	6,550	W	W	W	W
Other construction materials	71	257	--	--	29	401	692	7,140	32	154
Agricultural[6]	--	--	--	--	--	--	--	--	--	--
Chemical and metallurgical[7]	W	W	711	2,560	--	--	--	--	--	--
Special[8]	--	--	--	--	--	--	--	--	W	W
Other miscellaneous uses[9]	--	--	--	--	--	--	--	--	--	--
Unspecified:[10]										
Reported	--	--	43	245	--	--	407	2,420	415	2,330
Estimated	390	2,300	520	2,400	1,200	7,300	55	300	750	4,420
Total	911	6,020	1,380	5,760	3,400	26,200	3,450	28,600	1,470	9,940

	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	133	2,310	W	W	W	W	W	W
Coarse aggregate, graded[3]	W	W	2,890	23,400	W	W	W	W	--	--
Fine aggregate (-3/8 inch)[4]	W	W	1,730	16,100	W	W	W	W	--	--
Coarse and fine aggregates[5]	2,760	16,500	1,930	17,800	W	W	W	W	W	W
Other construction materials	8	107	217	1,500	--	--	135	755	15	92
Agricultural[6]	--	--	2	38	--	--	--	--	31	443
Chemical and metallurgical[7]	--	--	W	W	W	W	8,680	34,800	W	W
Special[8]	--	--	--	--	--	--	--	--	W	W
Other miscellaneous uses[9]	--	--	--	--	W	W	--	--	W	W
Unspecified:[10]										
Reported	2,530	14,500	1,060	6,920	(11)	(11)	1,020	5,940	--	--
Estimated	420	2,200	1,900	11,000	4,500	27,000	6,500	37,000	260	1,400
Total	8,090	55,200	11,800	89,200	6,640	40,000	19,300	99,700	718	5,600

	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	--	--
Coarse and fine aggregates[5]	W	W	W	W	--	--
Other construction materials	10	34	--	--	--	--
Agricultural[6]	--	--	--	--	--	--
Chemical and metallurgical[7]	--	--	--	--	--	--
Special[8]	--	--	--	--	--	--
Other miscellaneous uses[9]	--	--	--	--	--	--
Unspecified:[10]						
Reported	1,050	5,880	--	--	291	1,300
Estimated	440	2,500	480	2,800	--	--
Total	2,480	16,000	1,700	12,700	291	1,300

See footnotes at end of table.

TABLE 4--Continued

CALIFORNIA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2001, 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, riprap and jetty stone, and other coarse aggregates.

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

[4]Includes screening (undesignated), stone sand (concrete), stone sand bituminous mix or seal, and other fine aggregates.

[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 other agricultural uses.

[7]Includes cement manufacture, glass manufacture, and sulfur oxide removal.

[8]Includes asphalt 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 1/2 unit.

TABLE 5

CALIFORNIA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2001, BY MAJOR USE CATEGORY[1]

	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregates (including concrete sand)	39,600	$367,000	$9.27
Plaster and gunite sands	2,920	23,200	7.95
Concrete products (blocks, bricks, pipe, decorative, etc.)	233	3,350	14.38
Asphalt concrete aggregates and other bituminous mixtures	18,700	144,000	7.70
Road base and coverings[2]	14,900	98,900	6.64
Fill	7,770	44,700	5.75
Other miscellaneous uses[3]	1,450	12,300	8.48
Unspecified:[4]			
Reported	42,000	247,000	5.88
Estimated	21,000	140,000	6.79
Total or average	149,000	1,080,000	7.25

[1]Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

[2]Includes road and other stabilization (cement and lime).

[3]Includes railroad ballast and snow and ice control.

[4]Reported and estimated production without a breakdown by end use.

TABLE 6

CALIFORNIA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2001, BY USE AND DISTRICT[1]

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3		District 4	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregates (including concrete sand)	W	W	314	1,870	656	6,030	9,570	126,000
Concrete products (blocks, bricks, pipe, decorative, etc.)[2]	W	W	W	W	W	W	352	2,700
Asphaltic concrete aggregates and other bituminous mixtures	218	3,280	343	1,740	W	W	2,510	17,500
Road base and coverings[3]	239	1,780	534	2,750	W	W	5,220	34,200
Fill	34	156	109	271	100	948	790	3,950
Other miscellaneous uses[4]	307	2,790	33	268	619	5,190	142	1,020
Unspecified:[5]								
Reported	45	85	108	356	491	4,530	2,540	13,800
Estimated	1,160	7,010	1,400	8,180	118	791	5,940	46,580
Total	2,000	15,100	2,840	15,400	1,980	17,500	27,100	245,000

Use	District 5		District 6		District 7		District 8	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregates (including concrete sand)	519	4,060	2,710	31,800	1,030	10,400	5,980	44,400
Concrete products (blocks, bricks, pipe, decorative, etc.)[2]	W	W	W	W	W	W	112	922
Asphaltic concrete aggregates and other bituminous mixtures	W	W	1,640	17,200	W	W	2,450	20,300
Road base and coverings[3]	W	W	W	W	--	--	2,370	15,800
Fill	88	628	2,400	23,700	46	474	381	2,190
Other miscellaneous uses[4]	1,810	14,000	1,040	9,090	602	6,910	86	1,370
Unspecified:[5]								
Reported	1,630	10,300	3,630	23,500	1,000	6,340	386	2,600
Estimated	1,200	7,500	--	--	350	2,500	1,600	8,600
Total	5,230	36,500	11,400	105,000	3,030	26,600	13,300	96,200

Use	District 9		District 10		District 11		District 12	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate (including concrete sand)	3,840	22,700	667	5,310	11,300	87,700	W	W
Concrete products (blocks, bricks, pipe, decorative, etc.)[2]	1,060	6,430	76	634	715	5,900	194	3,210
Asphaltic concrete aggregates and other bituminous mixtures	3,920	17,400	W	W	5,490	46,200	W	W
Road base and coverings[3]	2,080	9,680	667	4,880	940	7,340	W	W
Fill	581	1,680	240	991	2,080	7,270	921	2,500
Other miscellaneous uses[4]	68	750	457	4,410	111	588	4,810	42,700
Unspecified:[5]								
Reported	15,300	83,700	639	3,890	8,320	52,800	6,640	42,500
Estimated	4,600	34,000	400	2,500	2,000	11,000	2,100	13,000
Total	31,500	176,000	3,140	22,600	31,000	219,000	14,700	104,000

Use	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]	--	--
Fill	--	--
Other miscellaneous uses[4]	--	--
Unspecified:[5]		
Reported	1,260	2,080
Estimated	--	--
Total	1,260	2,080

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