

# THE MINERAL INDUSTRY OF CALIFORNIA

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

In 1995, for the fourth consecutive year, California was the third leading State in the Nation in total nonfuel mineral production value,<sup>1</sup> according to the U.S. Geological Survey (USGS). The estimated value for 1995 was \$2.7 billion, an increase of more than 3% from that of 1994. This followed a 6.5% increase in 1994 from that of 1993 (based on final 1994 data). The State's portion of the U.S. total nonfuel mineral production value was more than 7%. Industrial minerals accounted for almost 87% of the State's nonfuel mineral value; the remaining 13% was metals, mostly gold, silver, and tungsten. Portland cement, construction sand and gravel, boron, and crushed stone were the leading industrial minerals, accounting for more than three-quarters of the State's industrial mineral value.

Compared with 1994, the value of the following nonfuel minerals increased: boron, crushed stone, diatomite, rare-earth metal concentrates, soda ash, fuller's earth clays, sodium sulfate, potash, common clays, magnesium compounds, gypsum, masonry cement, dimension stone, asbestos, feldspar, silver, talc and pyrophyllite, and usable iron ore. The value of the following decreased: portland cement, construction and industrial sand and gravel, gold, salt, lime, bentonite clays, kaolin clays, gemstones, and titanium (ilmenite). Pumice and pumicite and perlite also decreased, but the drop was marginal.

Based on USGS estimates of the quantities of minerals produced in the United States during 1995, California remained the Nation's only State to have boron and

TABLE 1  
NONFUEL RAW MINERAL PRODUCTION IN CALIFORNIA<sup>1 2</sup>

Mineral	1993		1994		1995 <sup>3</sup>	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
Asbestos metric tons	10,000	\$4,430	8,990	\$4,200	9,660	\$5,130
Boron minerals (B <sub>2</sub> O <sub>3</sub> ) do.	574,000	373,000	550,000	443,000	546,000	462,000
Cement:						
Masonry do.	W	W	99,000	6,830	100,000	6,910
Portland do.	8,510,000	468,000	9,640,000	539,000	9,220,000	515,000
Clays do.	1,930	26,300	<sup>3</sup> 1,570	<sup>3</sup> 20,600	<sup>3</sup> 3,450	<sup>3</sup> 31,600
Gemstones	NA	673	NA	1,710	NA	582
Gold <sup>4</sup> kilograms	35,800	415,000	<sup>5</sup> 30,100	<sup>5</sup> 373,000	<sup>5</sup> 29,500	<sup>5</sup> 354,000
Lime thousand metric tons	193	14,800	203	16,900	199	15,000
Rare-earth metal concentrates metric tons	17,800	W	20,700	W	W	W
Sand and gravel:						
Construction thousand metric tons	<sup>6</sup> 96,300	<sup>6</sup> 476,000	96,300	523,000	93,000	512,000
Industrial metric tons	1,800,000	41,700	1,740,000	39,400	1,650,000	36,200
Silver <sup>4</sup> do.	14	2,000	11	1,910	11	1,940
Stone:						
Crushed thousand metric tons	38,200	250,000	41,100	258,000	48,000	307,000
Dimension metric tons	29,100	6,300	<sup>6</sup> 11,100	<sup>6</sup> 4,030	33,600	6,460
Combined value of clays [fuller's earth, kaolin (1994-95)], diatomite, feldspar, gypsum (crude), iron ore (usable), magnesium compounds, mercury, perlite (crude), potash, pumice and pumicite, salt, soda ash, sodium sulfate (natural), stone [dimension limestone, sandstone, slate and miscellaneous (1994)], talc and pyrophyllite, titanium (ilmenite), tungsten, and values indicated by symbol W	XX	<sup>7</sup> 362,000	XX	<sup>7</sup> 364,000	XX	426,000
Total	XX	<sup>8</sup> 2,440,000	XX	<sup>8</sup> 2,590,000	XX	2,680,000

<sup>1</sup>Estimated. <sup>2</sup>Preliminary. <sup>3</sup>Revised. NA Not available. W Withheld to avoid disclosing company proprietary data; value included with "Combined value" data. XX Not applicable.

<sup>4</sup>Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

<sup>5</sup>Data are rounded to three significant digits; may not add to totals shown.

<sup>6</sup>Excludes certain clays; kind and value included with "Combined value" data.

<sup>7</sup>Recoverable content of ores, etc.

<sup>8</sup>Placer canvassing discontinued beginning 1994. May include placer data from other sources.

<sup>9</sup>Excludes certain stones; kind and value included with "Combined value" data.

tungsten production and became the only State having mine production of rare-earth metal concentrate and asbestos. California remained: first in the production of portland cement, construction sand and gravel, and diatomite; first of two States that produced natural sodium sulfate; second in gold and second of two States that produced soda ash and titanium (ilmenite); third in potash, perlite, and mercury; fourth in pumice; fifth in feldspar; sixth in fuller's earth, gypsum, and talc and pyrophyllite; and seventh in salt and iron ore (usable). While California climbed from 6th to 1st in the production of common clays; 3d to 2d in magnesium compounds; and 14th to 11th in dimension stone; the State dropped from 3d to 4th in industrial sand and gravel and bentonite; 8th to 9th in gemstones (based on value); and 6th to 10th in kaolin clay production. Although being lower in rank than the above mineral commodities, crushed stone was produced in significant quantities in the State's quarries, and lime and masonry cement were produced in manufacturing plants within the State.

According to the California Department of Conservation, Division of Mines and Geology (DMG), siting and permitting of mining operations throughout the State continued to generate some local controversies. The leading issues involved intense land use competition and wide-ranging environmental concerns, as well as the usual noise, dust, and truck-traffic issues in populated areas. The DMG Mineral Land Classification Program continued to provide government agencies with the mineral-resource maps that are necessary in land use planning and mineral conservation studies. Additionally, DMG completed land classification projects in Los Angeles, Orange, Placer, and San Bernardino Counties in 1995.

In the construction aggregate industry, permits for new and expanded sand and gravel operations throughout California were granted in 1995 by city, county, and Federal agencies. A significant new permit was approved for Granite Construction Co., to develop Granite Rock Co.'s Vernalis site in Stanislaus County. The mining of the Vernalis operation will supply about 40.6 million metric tons<sup>2</sup> (45 million short tons) of construction aggregate reserve to the central California region. Construction of a \$10 million highway interchange across Interstate 5 was one of the conditions required as part of the permit's approval. Other permits of note were granted to Solano Concrete Co., Inc. and Teichert Aggregates to mine about 48 hectares (120 acres) of construction aggregate adjacent to Cache Creek in Yolo County, and to Owl Rock Product Co. for sand mining along Wilson Creek in Riverside County, the latter permit having been granted late in 1994. An expansion of the Guadalupe Valley (Brisbane) Quarry operated by American Rock and Asphalt Inc. was approved by San Mateo County. Mega Sand Inc., a subsidiary of Taiki Corp., initiated a sand mining operation in the Sacramento River delta in Solano County.

Gold production in California accounted for more than 95% of the State's total metallic mineral value. Homestake

Mining Co.'s McLaughlin Mine in Lake, Napa, and Yolo Counties continued as the leading gold producer in California, followed closely by Santa Fe Pacific Gold Corp.'s Mesquite Mine in Imperial County. Viceroy Resources Corp. celebrated a milestone with the pouring of its 500,000th troy ounce (15,500 kilograms) of gold bullion at its Castle Mountain Mine in San Bernardino County. The mine had been producing for about 3 1/2 years. Siskon Gold Corp.'s San Juan Ridge underground mine began production in 1995; reserves were estimated at about 9,300 kilograms (300,000 troy ounces). Canyon Resources Corp. received county and Federal approval for mining at the Briggs Mine site in Inyo County. The mine is expected to produce about 20,000 kilograms (650,000 troy ounces) of gold during its anticipated 7-year life span, with mining expected to commence in mid-1996. Siskon Gold Corp.'s Big Horn Mine in San Bernardino County was granted a permit to mine by the county's Board of Supervisors, but a successful appeal by the Mojave Water Agency against the mine's proposed processing plant in the city of Adelanto has placed the project on hold. Glamis Gold Ltd. announced a new gold discovery located at a site of about 640 hectares (1,600 acres) in Imperial County. Glamis reported that the property contained about 81 million tons (90 million short tons) of ore averaging 0.58 grams of gold per ton (0.017 troy ounces per short ton). Completion of the project's final feasibility report was expected by spring 1996.

Production of tungsten continued at Avocet Tungsten, Inc.'s Pine Creek Mine in Inyo County. Most of the tungsten produced in 1995 came from concentrates purchased outside of the United States. Although no mining took place in 1995, some ore was processed from existing stockpiles. Avocet was planning to reopen the Pine Creek Mine during 1996. Other metallic minerals produced in the State included silver, iron, and mercury. California silver and mercury production resulted as a byproduct of the State's gold production, and all iron ore mined in the State in 1995 was used in the production of portland cement.

During the final days of the 1994-95 legislative session, SB 1108 was enacted granting remediating agencies limited liability for abandoned mine cleanup. Under provisions of the bill, if a public agency or a private entity in partnership with a public agency undergoes a remediation plan that successfully reduces the impact of water contamination, the agency or its affiliate cannot be held liable for any other preexisting contamination. The bill was expected to diminish any reluctance on the part of remediating agencies to confront mine cleanup due to possible legal consequences.

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<sup>1</sup>The terminologies "nonfuel mineral production" and related "values" encompass variations in meaning, depending on 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 1995 USGS data published in this chapter are estimated as of Dec. 1995.

Estimates for some commodities, e.g., construction sand and gravel, crushed stone, and portland cement, are periodically updated. To obtain the most recent information please contact the appropriate USGS mineral commodity specialist. Call MINES FaxBack at (703) 648-4999 from your fax machine and request Document No. 1000

for a telephone listing of all mineral commodity specialists or call USGS information at (703) 648-4000 for the specialist's name and number.

<sup>2</sup>All tons are metric tons unless otherwise specified.

TABLE 2  
CALIFORNIA: CRUSHED STONE<sup>1</sup> SOLD OR USED BY PRODUCERS IN 1994, BY USE<sup>2</sup>

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
<b>Coarse aggregate (+1 1/2 inch):</b>			
Riprap and jetty stone	1,350	\$10,800	\$8.00
Filter stone	198	1,040	5.25
Other coarse aggregate	25	97	3.88
<b>Coarse aggregate, graded:</b>			
Concrete aggregate, coarse	1,180	8,190	6.91
Bituminous aggregate, coarse	2,080	14,800	7.11
Bituminous surface-treatment aggregate	204	2,570	12.60
Railroad ballast	1,070	6,980	6.53
Other graded coarse aggregate	160	1,140	7.09
<b>Fine aggregate (-3/8 inch):</b>			
Stone sand, concrete	520	3,290	6.33
Stone sand, bituminous mix or seal	635	3,700	5.82
Screening, undesignated	491	1,820	3.71
Other fine aggregate	W	W	5.72
<b>Coarse and fine aggregates:</b>			
Graded road base or subbase	5,600	28,300	5.05
Unpaved road surfacing	237	1,070	4.50
Terrazzo and exposed aggregate	193	1,780	9.24
Crusher run or fill or waste	2,490	6,800	2.73
Other coarse and fine aggregates	417	1,670	4.01
Roofing granules	363	6,010	16.50
Other construction materials <sup>3</sup>	1,260	8,100	6.42
Agricultural: Poultry grit and mineral food <sup>4</sup>	99	1,780	18.00
Chemical and metallurgical: Cement manufacture <sup>5</sup>	12,900	45,900	3.56
<b>Special:</b>			
Asphalt filler or extenders	( <sup>6</sup> )	( <sup>6</sup> )	14.30
Whiting or whiting substitute	( <sup>6</sup> )	( <sup>6</sup> )	33.60
Other fillers or extenders	( <sup>6</sup> )	( <sup>6</sup> )	4.60
Other specified uses not listed <sup>7</sup>	1,560	47,400	30.30
<b>Unspecified:<sup>8</sup></b>			
Actual	1,770	11,000	6.23
Estimated	6,280	44,100	7.02
<b>Total</b>	<b>41,100</b>	<b>258,000</b>	<b>6.29</b>

W Withheld to avoid disclosing company proprietary data; included with "Other construction materials."

<sup>1</sup>Includes dolomite, granite, limestone, miscellaneous stone, quartzite, sandstone, shell, slate traprock, and volcanic cinder and scoria.

<sup>2</sup>Data are rounded to three significant digits; may not add to totals shown.

<sup>3</sup>Includes pipe bedding.

<sup>4</sup>Includes agricultural limestone and other agricultural uses.

<sup>5</sup>Includes lime manufacture and sulfur oxide removal.

<sup>6</sup>Withheld to avoid disclosing company proprietary data; included with "Other specified uses not listed."

<sup>7</sup>Includes flour (slate).

<sup>8</sup>Includes production reported without a breakdown by end use and estimates for nonrespondents.

TABLE 3  
**CALIFORNIA: CRUSHED STONE SOLD OR USED, BY KIND<sup>1</sup>**

Kind	1993				1994			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone	'36	'18,000	'\$120,000	\$6.64	35	23,300	\$149,000	\$6.37
Dolomite	'5	'173	'1,540	8.91	4	208	1,550	7.47
Marble	'1	'451	'2,490	5.51	—	—	—	—
Shell	2	W	W	6.96	1	W	W	7.71
Granite	112	6,700	43,700	6.53	53	4,880	23,400	4.79
Traprock	'40	7,570	54,200	7.16	21	6,090	43,500	7.15
Sandstone	'9	'1,180	'5,110	'4.35	4	521	2,850	5.47
Quartzite	2	W	W	8.00	4	602	3,460	5.75
Slate	3	299	2,380	7.95	2	W	W	8.89
Volcanic cinder and scoria	38	356	1,760	4.95	47	487	2,100	4.31
Miscellaneous stone	'52	'3,870	'20,000	5.18	78	4,750	31,000	6.51
Total	XX	38,700	252,000	'6.51	XX	41,100	258,000	6.29

<sup>1</sup>Revised. W Withheld to avoid disclosing company proprietary data; included with "Total." XX Not applicable.

<sup>2</sup>Data are rounded to three significant digits.

TABLE 4  
**CALIFORNIA: CRUSHED STONE<sup>1</sup> SOLD OR USED BY PRODUCERS IN 1994, BY USE AND DISTRICT<sup>2</sup>**

(Thousand metric tons and thousand dollars)

Use	District 2		District 3		District 5		District 6	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Construction aggregates:								
Coarse aggregate (+1 1/2 inch) <sup>3</sup>	125	517	W	W	128	1,180	W	W
Coarse aggregate, graded <sup>5</sup>	—	—	447	4,350	336	2,250	805	8,320
Fine aggregate (-3/8 inch) <sup>6</sup>	15	W	W	W	135	772	W	W
Coarse and fine aggregate <sup>7</sup>	W	W	1,380	8,050	1,030	6,240	1,920	8,560
Other construction materials <sup>8</sup>	850	4,120	534	4,560	315	2,480	574	4,170
Agricultural <sup>9</sup>	( <sup>10</sup> )	( <sup>10</sup> )	—	—	—	—	( <sup>4</sup> )	( <sup>4</sup> )
Chemical and metallurgical <sup>11</sup>	( <sup>10</sup> )	( <sup>10</sup> )	—	—	—	—	—	—
Special <sup>12</sup>	—	—	—	—	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )
Other miscellaneous uses	683	4,190	77	709	( <sup>4</sup> )	( <sup>4</sup> )	—	—
Unspecified: <sup>14</sup>								
Actual	70	141	25	77	22	242	1	2
Estimated	36	218	107	709	324	1,800	—	—
Total	1,780	9,200	2,570	18,500	2,300	15,600	3,330	21,300

See footnotes at end of table.

TABLE 4—Continued  
**CALIFORNIA: CRUSHED STONE<sup>1</sup> SOLD OR USED BY PRODUCERS IN 1994, BY USE AND DISTRICT<sup>2</sup>**

(Thousand metric tons and thousand dollars)

	District 7		District 8		District 9		District 10	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<b>Construction aggregates:</b>								
Coarse aggregate (+1 1/2 inch) <sup>3</sup>	44	563	( <sup>4</sup> )	( <sup>4</sup> )	W	W	( <sup>4</sup> )	( <sup>4</sup> )
Coarse aggregate, graded <sup>5</sup>	W	W	—	—	W	W	—	—
Fine aggregate (-3/8 inch) <sup>6</sup>	W	W	—	—	228	W	( <sup>4</sup> )	( <sup>4</sup> )
Coarse and fine aggregate <sup>7</sup>	1,930	8,610	( <sup>4</sup> )	( <sup>4</sup> )	W	W	( <sup>4</sup> )	( <sup>4</sup> )
Other construction materials <sup>8</sup>	3,140	18,400	—	—	1,550	14,600	—	—
Agricultural <sup>9</sup>	( <sup>4</sup> )	( <sup>4</sup> )	—	—	( <sup>10</sup> )	( <sup>10</sup> )	( <sup>10</sup> )	( <sup>10</sup> )
Chemical and metallurgical <sup>11</sup>	( <sup>4</sup> )	( <sup>4</sup> )	3,400	12,600	5,830	17,400	( <sup>10</sup> )	( <sup>10</sup> )
Special <sup>12</sup>	—	—	—	—	( <sup>10</sup> )	( <sup>10</sup> )	( <sup>10</sup> )	( <sup>10</sup> )
Other miscellaneous uses	11	94	( <sup>13</sup> )	( <sup>13</sup> )	1,470	46,900	75	931
<b>Unspecified:<sup>14</sup></b>								
Actual	87	230	—	—	25	42	—	—
Estimated	284	1,700	3,240	18,800	1,870	18,300	95	629
Total	8,440	40,900	6,670	31,500	11,000	97,200	221	1,920
	District 11		District 12					
	Quantity	Value	Quantity	Value				
<b>Construction aggregates:</b>								
Coarse aggregate (+1 1/2 inch) <sup>3</sup>	107	589	W	W				
Coarse aggregate, graded <sup>5</sup>	429	2,050	—	—				
Fine aggregate (-3/8 inch) <sup>6</sup>	( <sup>4</sup> )	( <sup>4</sup> )	—	—				
Coarse and fine aggregate <sup>7</sup>	( <sup>4</sup> )	( <sup>4</sup> )	W	W				
Other construction materials <sup>8</sup>	—	—	648	4,000				
Agricultural <sup>9</sup>	—	—	—	—				
Chemical and metallurgical <sup>11</sup>	—	—	—	—				
Special <sup>12</sup>	—	—	—	—				
Other miscellaneous uses	( <sup>4</sup> )	( <sup>4</sup> )	—	—				
<b>Unspecified:<sup>14</sup></b>								
Actual	1,540	10,300	—	—				
Estimated	—	—	324	1,940				
Total	3,800	16,300	971	5,940				

W Withheld to avoid disclosing company proprietary data; included with "Other construction materials."

<sup>1</sup>Production reported in District 1 was included with "District 2" and District 4 was included with "District 5" to avoid disclosing company proprietary data.

<sup>2</sup>Data are rounded to three significant digits; may not add to totals shown.

<sup>3</sup>Includes filter stone, riprap and jetty stone, and other coarse aggregate.

<sup>4</sup>Withheld to avoid disclosing company proprietary data; included with "Total."

<sup>5</sup>Includes concrete aggregate (coarse), bituminous aggregate (coarse), bituminous surface-treatment aggregate, railroad ballast, and other graded coarse aggregate.

<sup>6</sup>Includes stone sand (concrete), stone sand (bituminous mix or seal), screening (undesignated), and other fine aggregate.

<sup>7</sup>Includes graded road base or subbase, terrazzo and exposed aggregate, unpaved road surfacing, crusher run (select material or fill), and other coarse and fine aggregates.

<sup>8</sup>Includes pipe bedding and roofing granules.

<sup>9</sup>Includes agricultural limestone, poultry grit and mineral food, and other agricultural uses.

<sup>10</sup>Withheld to avoid disclosing company proprietary data; included with "Other miscellaneous uses."

<sup>11</sup>Includes cement manufacture, lime manufacture, and sulfur oxide removal.

<sup>12</sup>Includes asphalt fillers or extenders, other fillers or extenders, and whiting or whiting substitute.

<sup>13</sup>Less than 1/2 unit.

<sup>14</sup>Includes production reported without a breakdown by end use and estimates for nonrespondents.

TABLE 5  
**CALIFORNIA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1994 BY MAJOR USE CATEGORY<sup>1</sup>**

Use	Quantity (thousand metric tons)	Value (thousands)	Value per ton
Concrete aggregate (including concrete sand)	28,300	\$170,000	\$5.99
Plaster and gunitite sands	1,980	13,000	6.57
Concrete products (blocks, bricks, pipe, decorative, etc.)	1,030	6,890	6.71
Asphaltic concrete aggregates and other bituminous mixtures	11,800	77,300	6.55
Road base and coverings <sup>2</sup>	12,900	60,400	4.70
Fill	3,700	14,400	3.90
Railroad ballast	220	1,320	5.99
Filtration	447	3,310	7.41
Other <sup>3</sup>	452	3,290	7.28
Unspecified: <sup>4</sup>			
Actual	25,500	117,000	4.59
Estimated	10,000	56,400	5.62
Total or average	96,300	523,000	5.43

<sup>1</sup>Data are rounded to three significant digits; may not add to totals shown.

<sup>2</sup>Includes road and other stabilization (cement), snow and ice control.

<sup>3</sup>Includes roofing granules.

<sup>4</sup>Includes production reported without a breakdown by end use and estimates for nonrespondents.

TABLE 6  
**CALIFORNIA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1994, BY USE AND DISTRICT<sup>1</sup>**

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products <sup>2</sup>	465	3,620	529	2,560	892	7,940
Asphaltic concrete aggregates and road base materials <sup>3</sup>	1,320	11,500	1,390	9,120	618	4,400
Other miscellaneous uses <sup>4</sup>	28	177	3	28	14	48
Unspecified: <sup>5</sup>						
Actual	29	147	13	23	( <sup>6</sup> )	8
Estimated	217	1,800	135	680	—	—
Total	2,060	17,300	2,070	12,400	1,520	12,400
Use	District 4		District 5		District 6	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products <sup>2</sup>	5,200	33,400	775	5,410	2,990	21,400
Asphaltic concrete aggregates and road base materials <sup>3</sup>	7,150	45,800	1,280	7,670	2,880	16,300
Other miscellaneous uses <sup>4</sup>	43	199	217	1,430	479	3,480
Unspecified: <sup>5</sup>						
Actual	41	210	117	857	2,360	4,740
Estimated	2,050	12,900	1,300	6,080	1,230	7,140
Total	14,500	92,400	3,680	21,400	9,930	53,000

See footnotes at end of table.

TABLE 6—Continued  
**CALIFORNIA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1994, BY USE AND DISTRICT<sup>1</sup>**

(Thousand metric tons and thousand dollars)

	District 7		District 8		District 9	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products <sup>2</sup>	1,620	12,300	3,640	19,000	6,310	30,100
Asphaltic concrete aggregates and road base materials <sup>3</sup>	780	2,600	3,400	16,300	5,230	18,700
Other miscellaneous uses <sup>4</sup>	132	1,120	64	555	18	71
Unspecified: <sup>5</sup>						
Actual	—	—	2,190	11,500	4,450	19,800
Estimated	341	2,250	825	4,430	589	3,390
Total	2,870	18,200	10,100	51,700	16,600	72,000
	District 10		District 11		District 12	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products <sup>2</sup>	480	1,760	6,900	41,600	1,550	10,800
Asphaltic concrete aggregates and road base materials <sup>3</sup>	137	366	2,740	14,100	1,430	5,380
Other miscellaneous uses <sup>4</sup>	3	7	22	169	96	629
Unspecified: <sup>5</sup>						
Actual	23	37	12,700	59,200	3,540	20,600
Estimated	465	2,510	553	2,700	2,340	12,500
Total	1,110	4,680	22,900	118,000	8,960	49,800

<sup>1</sup>Data are rounded to three significant digits; may not add to totals shown.

<sup>2</sup>Includes plaster and gunite sands.

<sup>3</sup>Includes fill, road and other stabilization (cement).

<sup>4</sup>Includes filtration, railroad ballast, and roofing granules.

<sup>5</sup>Includes production reported without a breakdown by end use and estimates for nonrespondents.

<sup>6</sup>Less than 1/2 unit.