

CONSTRUCTION SAND AND GRAVEL

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Construction sand and gravel, one of the most accessible natural resources and a major basic raw material, is used mostly by the construction industry. The construction sand and gravel industry is a major contributor to and an indicator of the economic well-being of the Nation, producing a high volume of basic products with low unit value.

A total of 1.11 billion metric tons of construction sand and gravel was produced in the United States in 1999; this was a 2.8% increase compared with that of 1998 (table 1). After a decrease in production in 1991, sand and gravel production increased each year for the following 8 years, an indication of the continuous strong demand for construction aggregates in the United States.

In January 2000, the U.S. Geological Survey (USGS) mailed 7,634 construction sand and gravel survey forms to operations throughout the United States; an additional 283 operations that were not mailed survey forms provided information to the USGS. In 1999, 6,137 operations were active, 1,199 operations were idle, and 581 operations were either reported or assumed to be permanently shut down. A small number of the idle sand and gravel operations reported the recycling of asphalt and portland cement concrete, but no sand and gravel mining. In 1999, of the 6,137 active operations surveyed, 5,116, or 83.4%, responded to the USGS. These operations contributed 75% of the 1.11 billion tons produced in 1999. The 6,137 operations were run by 4,003 companies with 8,137 active sand and gravel pits (tables 9 and 10).

Foreign trade of construction sand and gravel remained minor in 1999. Exports decreased by about 30% to 1.65 million metric tons (Mt), and the value decreased by 26% to \$27.9 million, when compared with the 1998 results.

Imports increased about 71% to 1.92 Mt, and the value increased by nearly 65% to \$24.4 million. Because imports and exports were small, domestic apparent consumption of construction sand and gravel, defined as production for consumption (sold or used) plus total imports minus total exports, was essentially equal to the U.S. production of 1.11 billion tons.

Legislation

On September 3, 1999, the Mine Safety and Health Administration (MSHA) published "Health Standards for Occupational Noise Exposure - 30 CFR Parts 56, 57, 62, 70 and 71." This final comprehensive rule replaces MSHA's existing standards for occupational noise exposure in coal mines and metal and nonmetal mines. The final rule establishes uniform requirements to protect the Nation's miners from occupational noise-induced hearing loss. The rule is

derived in part from existing MSHA noise standards, and from the Department of Labor's existing occupational noise exposure standard for general industry promulgated by the Occupational Safety and Health Administration. As a result of the Agency's ongoing review of its safety and health standards, MSHA determined that its noise standards, which are more than 20 years old, did not adequately protect miners from occupational noise-induced hearing loss. The final rule becomes effective on September 13, 2000.

On September 30, 1999, MSHA published the final rule regarding "Training and Retraining of Miners Engaged in Shell Dredging or Employed at Sand, Gravel, Surface Stone, Surface Clay, Colloidal Phosphate, or Surface Limestone Mines - 30 CFR Parts 46 and 48." Two corrections to the final rule were published on September 13, 1999, and on November 8, 2000. This final rule amends MSHA's existing health and safety training regulations by establishing new training requirements for shell dredging, sand, gravel, surface stone, surface clay, colloidal phosphate, and surface limestone mines. This final rule implements the training requirements of section 115 of the Federal Mine Safety and Health Act of 1997 and provides for effective miner training at the affected mines. At the same time, the final rule allows mine operators the flexibility to tailor their training programs to the specific needs of their miners and operations. This regulation becomes effective on October 2, 2000.

Under a broad Bureau of Land Management (BLM) proposal that would impose new environmental and financial responsibility requirements at surface mining operations on public lands, sand, gravel, and building stone operations would be restricted. The intent of the new rules is to prevent undue degradation of public land resources. The provisions affecting "common variety minerals" will apply to mining claims located on public lands on or after July 23, 1955, and would restrict mining of sand, gravel, and building stone until BLM has prepared a mineral examination report. Requiring a mineral report before allowing operations extracting common variety minerals "would help ensure the public interest and the federal treasury are protected because it would avoid giving away for free what the law on common varieties says must be disposed of for fair market value" (Rock Products, 1999a).

Production

Of the four major geographic regions, the West again led the Nation in the production of construction sand and gravel with 428 Mt, or 39% of the U.S. total (table 2). It was followed by the Midwest with 331 Mt, or 30%; the South with 242 Mt, or 22%; and the Northeast with 106 Mt, or 9%. Production

increased in all the major geographic regions except in the Northeast where production dropped 4%, compared with that of 1998.

Of the nine geographic divisions, the East North Central led the Nation in the production of construction sand and gravel with 221 Mt, or 20.0% of the U.S. total and was followed by the Pacific with 215 Mt, or 19.4%, and the Mountain with 213 Mt, or 19.2% (table 2; figure 1). Production increased in seven of the nine divisions compared with that of 1998—the West South Central, 7.5%; the South Atlantic, 6.4%; the East North Central, 4.2%; the Mountain, 3.9%; the East South Central, 3.5%; the West North Central, 1.9% and the Pacific, 1.4%. Two divisions had declines in production in 1999 compared with 1998: the Middle Atlantic, down 4.4% and New England, down 3.5%.

A review of the production for consumption by size of operation indicates that 36.6% of the construction sand and gravel produced in 1999 came from 1,961 operations reporting between 100,000 and 499,999 metric tons per year (t/yr), 25.5% came from 443 operations reporting between 500,000 and 999,999 t/yr, and 27.4% came from 206 operations reporting more than 1 million metric tons per year (Mt/yr) (table 8). At least 5.1% (298) of the operations active in 1998 were shut down during 1999.

The estimated production for consumption by quarter for 1999 indicates that most of the construction sand and gravel in the United States was produced in the third quarter, followed by the second and the fourth quarters (table 3). Estimated production by each quarter was also available for most States (table 5).

In 1999, construction sand and gravel was produced in every State (table 4). The leading States were, in descending order of tonnage, California, Texas, Michigan, Arizona, Ohio, Colorado, Washington, Utah, Minnesota, and Wisconsin. Their combined production represented 55% of the national total. Production increased in 23 States, decreased in 20, and stayed about the same in 7 States, compared with that of 1998. Production increased in 6 of the top 10 States; decreases occurred in Minnesota, Ohio, Utah, and Washington.

Limited information about the production of construction sand and gravel in foreign countries may be found in the USGS's Minerals Yearbook, Volume III, Area Reports: International. For nonreporting countries, estimates of sand and gravel and crushed stone outputs can be based on indirect indicators, such as the level of asphalt and cement consumption.

Acquisitions and Consolidations

In an industry with thousands of operating companies, status and ownership changes are many. Although reviewing them all is not possible, a few noteworthy events follow.

Aggregate Industries, Inc., purchased Denver, CO-based Hammer Group. The assets include a sand and gravel operation and a stone operation serving the Denver metropolitan area (Aggregates Manager, 1999).

Florida Rock Industries, Inc., purchased Custom Ltd., a privately held ready-mixed concrete and sand and gravel

producer in Williamsburg, VA. The acquisition includes a sand and gravel mine in Charles City County, VA, about 32 kilometers (km) southeast of Richmond, VA (Rock Products, 1999e).

Hanson Building Materials America acquired Oakland, CA-based Tidewater Sand and Gravel, Inc., and Moe Sand Co. Tidewater conducts dredging from four long-term leases in San Francisco Bay (Pit and Quarry, 1999).

In an effort to unify its corporate structure, Hanson PLC of London, UK, announced in January that it changed the name of its U.S. subsidiary, Cornerstone Construction and Materials Inc., to Hanson Building Materials America. Hanson is the third largest aggregates producing company in the United States (Rock Products, 1999b).

Luck Stone Corp. has acquired two more sand and gravel companies in Virginia. Luck now has a total of three sand and gravel operations and 14 crushed stone quarries in central and western Virginia. Luck bought Smith Sand and Gravel Co. in December 1998, and King William Sand and Gravel, Inc., in February, 1999 (Rock Products, 1999d).

LaFarge Corp. purchased privately held Corn Construction Co. of New Mexico. Corn operates 9 portable aggregate plants and has 33 aggregate property leases in New Mexico and southern Colorado. The acquisition adds 1.3 Mt/yr of aggregate sales to LaFarge's current 4-Mt/yr sales in the two areas (Rock Products, 1999c).

Oldcastle Materials Group acquired Michigan-based Thompson-McCully Co. Thompson-McCully operates a quarry near Detroit and 13 sand and gravel pits across southern Michigan. It has more than 200 Mt of aggregate reserves (Rock Products, 1999f).

Pioneer USA of Houston, TX, a subsidiary of Australia-based Pioneer International, Ltd., announced that it changed the names of Davison Sand & Gravel Co. and Beckley Stone Co. to Pioneer Mid-Atlantic, Inc. Davison has operations in Pennsylvania and Beckley Stone in West Virginia and South Carolina (Rock Products, 1999h).

Pioneer also purchased a Nevada 1.3-Mt/yr sand and gravel operation. The operation is within 16 km of downtown Las Vegas and has about 45 years of reserves at currently permitted production rates (Rock Products, 1999g).

Texas Industries, Inc., purchased Webberville Sand and Gravel, Inc. Webberville produces about 0.5 Mt/yr of sand and gravel for the Austin, TX, market (Aggregates Manager, 1999).

Consumption

Construction sand and gravel reported by producers to the USGS was actually material that was "Sold or used" by the companies and was defined as such. Stockpiled production is not reported until it is sold or consumed by the producer. Because no consumption surveys are conducted by the USGS for sand and gravel, the "Sold or used" tonnage is assumed to represent the amount produced for domestic consumption and export. Because some of the construction sand and gravel producers did not report a breakdown by end use, their total production was reported under "Unspecified uses, reported." The estimated production of nonrespondents was reported

under “Unspecified uses, estimated.”

Of the 1.11 billion tons of construction sand and gravel produced in 1999, 530 Mt, or 47.7% of the total, was for unspecified uses (table 6). Of the remaining 580 Mt, 40.9% was used as concrete aggregates; 24.9% for road base and coverings and road stabilization; 14.0% for asphaltic concrete aggregates and other bituminous mixtures; 13.2% for construction fill; 2.0% for plaster and gunite sands; 1.8% for concrete products, such as blocks, bricks, pipes, etc.; and the remainder for filtration, railroad ballast, roofing granules, snow and ice control, and other miscellaneous uses.

To provide a more accurate estimation of the consumption patterns for construction sand and gravel, the “Unspecified uses” are not included in the above percentages. In any marketing or use pattern analysis, the quantities included in “Unspecified uses” should be distributed among the reported uses by applying the above percentages.

A review of consumption by geographic regions and divisions, excluding the “Other uses” category in table 7, indicates that more than 63% of the sand and gravel consumed in the South Region was for concrete aggregate. In all other regions, about 35% of the sand and gravel was consumed by this market.

The plaster and gunite market consumed nearly 7% of the sand and gravel from the South Atlantic Division, about 2.9% in the two divisions of the West Region, and much less than 1% in all the remaining divisions.

The production of concrete products consumed between 0.4% and 3.9% of the sand and gravel throughout the country. In the Northeast Region, 2.1% was consumed for concrete products; in the Midwest, 1.8%; in the West, 1.5%; and in the South, 1.4%.

About 15% was consumed for asphalt concrete in all regions except in the South where just over 7% was consumed for asphalt concrete. At the division level, consumption for asphalt concrete ranged from 4.4% in the West South Central Division to 20.2% in the East South Central Division.

Between 24% and 40% of the sand and gravel consumed in the East North Central, the Mountain, the New England, the Pacific, and the West North Central Divisions was for road base and coverings. In the Mid-Atlantic and the East South Central Divisions, about 17% of the sand and gravel was consumed for road base and coverings, and in the South Atlantic and the West South Central Divisions, about 7% was used.

Between 16% and 21% of sand and gravel was used for fill in the East North Central, the New England, the South Atlantic, and the West South Central Divisions. About 10% of the sand and gravel in the Mid-Atlantic, the Mountain, and the West North Central Divisions was used for fill. In the East South Central and Pacific Divisions, less than 6% of the sand and gravel was consumed for fill.

Additional information regarding production and/or consumption of construction sand and gravel by major uses in each State and the State districts may be found in the USGS Minerals Yearbook, Volume II, Area Reports: Domestic.

Recycling

The aggregates industry has been involved with recycling for several decades. Recently, recycling has become more important to aggregate producers, and the number of aggregate companies that are recycling has been increasing. Recycling in this industry generally refers to the crushing, screening, and reuse of cement and asphalt concretes. Aggregate and related asphalt and ready-mix companies are often involved at construction projects where they collect and reuse the materials at the site. Some construction companies haul their materials to the recycling location where the asphalt or concrete is processed for reuse. The annual survey of construction sand and gravel producers collects information on recycling of cement and asphalt concrete performed only by sand and gravel producing companies. No information on recycling of these materials by construction or demolition companies is collected by the USGS.

Asphalt Concrete.—A total of 6.38 Mt of asphalt concrete valued at \$27.2 million was recycled by 172 sand and gravel companies in 39 States; this volume represented a 46% increase compared with that of 1998 (tables 14 and 15). Leading States were, in descending order of tonnage recycled, California, Minnesota, Michigan, and Wisconsin. Leading companies were, in order of volume produced, Weber Sand and Gravel, Inc., Aman Brothers, Inc., Granite Construction Co., Vulcan, Inc., Jones Construction Co., and Wyroc, Inc.

Cement Concrete.—A total of 6.68 Mt of cement concrete valued at \$28.5 million was recycled by 167 companies in 34 States; this volume represented a 50% increase compared with that of 1998 (tables 14 and 16). Leading States were, in descending order of tonnage recycled, California, Minnesota, Wisconsin, and New York. Leading companies were, in order of volume produced, Premier Aggregates, Inc., Aman Brothers, Granite Construction, Aggregates Industries, Inc., and Atlas Sand and Gravel Co.

Transportation

Information regarding the method of transportation of construction sand and gravel from the pit or processing plant to the first point of sale or use is available for each geographic region, as well as for the total United States, and is shown in table 11. Reports regarding the method of transportation were provided by the producers for 538 Mt, or 48% of the total U.S. production of construction sand and gravel. Of this total, 81.2% was transported by truck; 2.5% by waterway; and 1% by rail. A significant amount of construction sand and gravel produced (about 14%) was not transported, but was used at the production site. Because most producers did not either keep records or report shipping distances or cost per metric ton per mile, no transportation cost data were available.

Prices

Prices in this chapter are f.o.b. plant, usually at the first point of sale or captive use. This value does not include transportation from the plant or yard to the consumer. It does,

however, include all costs of mining, processing, in-plant transportation, overhead costs, and profit.

The 1999 average unit price increased by about 3.5% to \$4.73 per metric ton, compared with that of 1998 (table 6). By use, the unit prices varied from a high of \$6.84 for roofing granules to a low of \$3.10 for fill. The largest increases were recorded for concrete products (10.9%) and fill (9.9%). The largest average unit price declines were for roofing granules (23.2%) and road stabilization (lime) (10.3%).

Foreign Trade

The widespread distribution of domestic sand and gravel deposits and the high cost of transportation limits foreign trade to mostly local transactions across international boundaries. U.S. imports and exports were small, representing less than 1% of the domestic consumption.

Exports of construction sand decreased by about 32% to 1.27 Mt compared with that of 1998, and the value decreased by 31% to \$20.8 million (table 12). Mexico was the major destination, receiving about 42% of the total and was followed by Canada with 25%. Exports of construction gravel decreased by 22% to 378,000 tons, and the value decreased by 5% to \$7.08 million. Canada was the major destination, receiving about 79% of the total.

Imports increased by about 71% to 1.92 Mt, and the value increased by about 65% to \$24.4 million (table 13). Canada was the major source of imported construction sand and gravel with 69% of the total and was followed by Mexico with about 20%.

Outlook

The demand for construction sand and gravel in 2000 is expected to increase about 5% to 1.16 billion tons. There are some indications from the quarterly survey that a slowing economy might begin to affect production and sales in late 2000 and into 2001, so that the full 5% increase might not be realized.

Construction sand and gravel f.o.b. prices are expected to increase only marginally. The delivered prices of construction sand and gravel are, however, expected to increase especially in and near metropolitan areas mainly because more aggregates are transported from distant sources.

For 2000, the industry is expected to continue to consolidate. Resistance to mining especially at the local level will push production to more-rural areas and increase transportation cost. Acquisition cost of companies will escalate because of the difficulty of starting greenfield operations, which will allow resourceholders to demand higher prices for already permitted operations.

References Cited

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Pit and Quarry, 1999, Acquisitions: *Pit and Quarry*, v. 92, no. 2, August, p. 12.
Rock Products, 1999a, BLM pursues new surface mining limits: *Rock Products*, v. 102, no. 3, March, p. 11.

- 1999b, Cornerstone changes name to Hanson: *Rock Products*, v. 102, no. 2, February, p. 7.
———1999c, Lafarge targets New Mexico markets: *Rock Products*, v. 102, no. 5, May, p. 7.
———1999d, Luck Stone expands sand and gravel holdings: *Rock Products*, v. 102, no. 4, April, p. 7.
———1999e, Merger & acquisition activity: *Rock Products*, v. 102, no. 7, July, p. 7.
———1999f, Mergers & acquisitions—No end in sight: *Rock Products*, v. 102, no. 8, August, p. 7.
———1999g, Monthly merger and acquisition activity: *Rock Products*, v. 102, no. 6, June, p. 7.
———1999h, Pioneer renames Mid-Atlantic operations: *Rock Products*, v. 102, no. 2, February, p. 7.

GENERAL SOURCES OF INFORMATION

U.S. Geological Survey Publications

- Crushed stone and sand and gravel, Mineral Industry Surveys, quarterly.¹
Directory of Principal Crushed Stone Producers, Mineral Industry Surveys, annual.
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Other

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¹Prior to January 1996, published by the U.S. Bureau of Mines.

TABLE 1
SALIENT U.S. CONSTRUCTION SAND AND GRAVEL STATISTICS 1/

		1995	1996	1997	1998	1999
Sold or used by producers:						
Quantity 2/	thousand metric tons	907,000 r/	914,000 3/	952,000	1,070,000 r/	1,110,000
Value 2/	thousands	\$3,900,000	\$4,000,000 3/	\$4,260,000	\$4,910,000 r/	\$5,250,000
Exports, value	do.	\$24,700	\$23,300	\$22,300	\$37,800	\$27,900
Imports, value	do.	\$12,000	\$15,800	\$18,100	\$15,000	\$24,400

r/ Revised.

1/ Data are rounded to no more than three significant digits.

2/ Puerto Rico excluded from all sand and gravel statistics.

3/ Excludes Hawaii.

TABLE 2
CONSTRUCTION SAND AND GRAVEL SOLD OR USED BY
PRODUCERS IN THE UNITED STATES, BY GEOGRAPHIC DIVISION 1/

Region/Division	1998				1999			
	Quantity (thousand metric tons)	Percent of total	Value (thousands)	Percent of total	Quantity (thousand metric tons)	Percent of total	Value (thousands)	Percent of total
Northeast:								
New England	43,000	4.0	\$213,000	4.3	41,500	3.7	\$213,000	4.1
Middle Atlantic	67,900	6.3	368,000	7.5	64,900	5.9	359,000	6.8
Midwest:								
East North Central	212,000	19.8 r/	866,000	17.7 r/	221,000	20.0	903,000	17.2
West North Central	108,000	10.0	396,000	8.1	110,000	9.9	403,000	7.7
South:								
South Atlantic	75,100	7.0	343,000	7.0	79,900	7.2	375,000	7.2
East South Central	45,200	4.2	206,000	4.2	46,800	4.2	213,000	4.1
West South Central	107,000	10.0 r/	500,000	10.2 r/	115,000	10.4	549,000	10.5
West:								
Mountain	205,000	19.0	837,000	17.1 r/	213,000	19.2	949,000	18.1
Pacific	212,000 r/	19.7 r/	1,180,000 r/	24.0 r/	215,000	19.4	1,280,000	24.5
Total	1,070,000 r/	100.0	4,910,000 r/	100.0	1,110,000	100.0	5,250,000	100.0

r/ Revised.

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

TABLE 3
SAND AND GRAVEL SOLD OR USED BY PRODUCERS IN THE UNITED STATES IN 1999, BY QUARTER AND DIVISION 1/

Region/Division	Quantity		Quantity		Quantity		Quantity		Total 2/ (thousand metric tons)	Value total 2/ (thousands)
	1st quarter (thousand metric tons)	Percent- age change 3/	2d quarter (thousand metric tons)	Percent- age change 3/	3d quarter (thousand metric tons)	Percent- age change 3/	4th quarter (thousand metric tons)	Percent- age change 3/		
Northeast:										
New England	5,200	-7.1	11,800	3.8	13,900	-3.9	10,500	-8.0	41,400	210,000
Middle Atlantic	8,300	-9.4	19,200	-4.5	23,000	-2.3	15,100	-0.5	65,600	364,000
Midwest:										
East North Central	26,600	9.5	63,100	4.7	72,900	3.1	56,500	-0.7	219,000	916,000
West North Central	11,200	21.2	33,700	2.4	42,700	7.7	27,900	7.2	116,000	435,000
South:										
South Atlantic	18,200	12.9	21,300	4.6	20,100	0.6	17,800	-4.8	77,400	362,000
East South Central	8,700	3.0	12,900	-4.0	14,800	20.8	9,700	-12.2	46,100	215,000
West South Central	24,600	7.4	26,400	-12.5	27,200	-4.7	24,600	-3.3	103,000	492,000
West:										
Mountain	47,500	15.7	53,900	-9.7	57,600	2.0	50,000	5.7	209,000	877,000
Pacific 4/	39,200	20.2	53,900	12.1	62,500	0.1	57,300	2.1	213,000	1,220,000
Total 3/	190,000	11.8	296,000	-0.1	335,000	2.0	270,000	0.5	1,100,000 5/	5,090,000 5/

1/ As published in Crushed Stone and Sand and Gravel in the Fourth Quarter of 1999, U.S.G.S. Mineral Industry Surveys.

2/ Data may not add to totals shown because of independent rounding and differences between projected totals by States and regions.

3/ All percentage changes are calculated by using unrounded totals; percentage changes are based on the previous year's corresponding quarter.

4/ Does not include Alaska and Hawaii.

5/ Includes Alaska and Hawaii.

TABLE 4
CONSTRUCTION SAND AND GRAVEL SOLD OR USED BY
PRODUCERS IN THE UNITED STATES, BY STATE 1/

State	1998			1999		
	Quantity (thousand metric tons)	Value (thousands)	Unit value	Quantity (thousand metric tons)	Value (thousands)	Unit value
Alabama	14,400	\$64,100	\$4.45	15,500	\$68,900	\$4.45
Alaska 2/	11,200 r/	59,800 r/	5.33 r/	9,620	48,500	5.04
Arizona	47,900	229,000	4.78	54,500	296,000	5.42
Arkansas	12,100	55,400	4.58	11,300	53,200	4.72
California	135,000	801,000	5.93	145,000	897,000	6.20
Colorado	42,900	195,000	4.54	45,200	217,000	4.80
Connecticut	6,380	29,200	4.58	6,510	32,400	4.98
Delaware	2,560	11,500	4.50	2,100	10,800	5.14
Florida	20,900	84,600	4.04	27,200	114,000	4.19
Georgia	7,130	29,500	4.14	7,200	30,100	4.18
Hawaii	368	4,590	12.48	508	5,840	11.50
Idaho	16,600	52,400	3.16	15,500	48,200	3.12
Illinois	34,100	150,000	4.40	34,100	147,000	4.32
Indiana	24,000	101,000	4.22	29,500	126,000	4.26
Iowa	13,500	58,500	4.33	13,500	60,600	4.49
Kansas	10,800	31,400	2.91	10,800	31,300	2.91
Kentucky	8,100	27,500	3.39	9,620	32,400	3.37
Louisiana	11,400	53,800	4.72	16,500	81,700	4.96
Maine	7,640	33,400	4.37	8,570	40,300	4.70
Maryland	10,400	60,500	5.83	8,970	56,500	6.29
Massachusetts	14,000	78,000	5.56	12,700	75,200	5.90
Michigan	66,900	245,000	3.66	70,200	245,000	3.48
Minnesota	39,400	154,000	3.91	37,300	142,000	3.80
Mississippi	13,300	64,400	4.83	12,100	58,900	4.88
Missouri	9,470	39,300	4.15	12,400	50,300	4.05
Montana	8,550	34,900	4.08	12,000	50,700	4.22
Nebraska	13,800	47,000	3.40	12,000	40,800	3.40
Nevada	26,400	114,000	4.32	31,700	142,000	4.48
New Hampshire	8,590	40,000	4.66	7,950	36,700	4.62
New Jersey	16,600	90,800	5.48	16,500	91,500	5.55
New Mexico	11,100	53,300	4.78	10,600	53,000	4.99
New York	32,100	161,000	5.03	29,900	152,000	5.10
North Carolina	10,900	58,000	5.31	11,600	62,900	5.43
North Dakota	10,700	30,400	2.84	11,700	33,000	2.83
Ohio	52,600	255,000	4.84	52,000	257,000	4.95
Oklahoma	9,000	35,900	3.99	10,200	41,200	4.04
Oregon	18,600	99,200	5.34	16,900	105,000	6.20
Pennsylvania	19,200	116,000	6.06	18,600	115,000	6.20
Rhode Island	1,390	11,100	7.99	1,310	9,900	7.56
South Carolina	9,690	35,900	3.70	9,660	38,200	3.96
South Dakota	10,100	35,600	3.51	12,400	45,600	3.67
Tennessee	9,410	49,800	5.29	9,640	53,100	5.50
Texas	74,600	354,000	4.75	77,100	373,000	4.83
Utah	46,300	140,000	3.03	39,500	125,000	3.17
Vermont	4,940	21,200	4.29	4,430	18,800	4.24
Virginia	11,900	54,800	4.63	11,300	53,800	4.75
Washington	46,300 r/	214,000	4.61 r/	43,800	227,000	5.18
West Virginia	1,650	8,050	4.89	1,850	9,030	4.88
Wisconsin	34,700	116,000	3.33	35,700	128,000	3.59
Wyoming	4,770	18,100	3.80	4,410	17,200	3.91
Total	1,070,000 r/	4,910,000 r/	4.57	1,110,000	5,250,000	4.73

r/ Revised.

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

2/ Data derived in part from Alaska Division of Geological and Geophysical Surveys information.

TABLE 5
SAND AND GRAVEL SOLD OR USED BY PRODUCERS IN THE UNITED STATES IN 1999, BY QUARTER AND STATE 1/

State	Quantity 1st quarter (thousand metric tons)	Percent- age change 3/	Quantity 2d quarter (thousand metric tons)	Percent- age change 3/	Quantity 3d quarter (thousand metric tons)	Percent- age change 3/	Quantity 4th quarter (thousand metric tons)	Percent- age change 3/	Total 2/ (thousand metric tons)	Value total 2/ (thousands)
Alabama	3,500	11.2	4,100	4.5	4,200	11.1	3,700	3.7	15,500	84,800
Alaska 4/	--	--	--	--	--	--	--	--	13,200	71,200
Arizona	14,400	39.6	14,900	13.0	14,200	17.0	13,500	10.1	57,000	331,000
Arkansas	2,600	7.5	2,900	-16.0	3,300	-2.4	2,900	2.9	11,700	65,800
California	27,900	33.8	37,400	21.2	43,500	3.3	41,400	0.6	150,000	1,040,000
Colorado	8,900	24.5	11,400	-5.1	13,700	4.6	10,800	1.8	44,800	249,000
Connecticut	800	-26.6	1,700	-0.1	1,800	-7.5	1,500	-7.2	5,840	32,700
Delaware 5/	--	--	--	--	--	--	--	--	2,110	11,700
Florida	5,600	16.2	6,000	8.7	5,800	12.4	5,600	4.2	23,000	117,000
Georgia	2,200	75.8	2,600	44.6	2,400	9.4	2,100	12.0	9,320	48,200
Hawaii 4/	--	--	--	--	--	--	--	--	400	5,090
Idaho	1,800	-49.6	3,900	-24.5	5,200	10.5	3,200	0.9	14,100	59,000
Illinois	4,100	4.6	10,700	6.5	10,700	-2.9	9,600	4.3	35,000	190,000
Indiana	5,600	20.7	8,600	25.3	8,400	25.0	6,300	8.5	28,900	152,000
Iowa	1,000	3.7	3,600	-5.6	4,600	-7.1	3,500	-4.7	12,800	68,500
Kansas	1,500	-32.5	2,300	-29.3	3,000	-8.1	2,300	10.7	9,090	35,800
Kentucky	1,500	-3.3	2,600	24.4	2,500	-0.2	2,300	20.5	8,950	39,600
Louisiana	2,500	5.7	2,900	-14.1	2,600	-12.7	2,500	-6.2	10,500	60,500
Maine	600	66.9	2,400	28.0	3,400	4.9	2,300	3.1	8,610	46,500
Maryland	1,900	-18.7	2,400	-9.2	2,400	-18.5	2,400	-1.1	9,130	62,700
Massachusetts	2,200	0.1	4,100	5.4	3,800	-2.9	3,600	-10.3	13,700	90,100
Michigan	6,300	1.2	18,500	-5.7	23,800	-1.7	17,300	2.9	65,900	309,000
Minnesota	1,800	38.7	13,700	2.3	18,000	17.3	10,200	9.5	43,700	216,000
Mississippi	2,200	0.9	3,600	-8.7	4,600	24.2	2,500	-28.1	12,900	75,500
Missouri	2,100	70.6	3,200	40.9	4,000	22.7	3,300	22.4	12,600	65,300
Montana 5/	--	--	--	--	--	--	--	--	8,900	45,500
Nebraska	1,600	31.5	4,500	-9.8	4,700	0.7	2,600	-10.9	13,400	59,300
Nevada	5,900	6.2	6,200	-15.4	6,300	-17.2	7,300	22.0	25,600	137,000
New Hampshire	1,200	-7.7	2,000	-11.4	3,000	-5.4	1,800	-1.5	8,030	45,700
New Jersey	3,200	-19.5	4,600	8.1	4,900	9.2	4,600	17.0	17,300	112,000
New Mexico	2,100	-14.5	2,600	-25.4	2,500	-20.9	3,500	64.2	10,600	61,600
New York	3,400	7.5	8,600	-16.8	11,700	-6.3	5,900	-2.8	29,600	179,000
North Carolina	2,000	-15.9	2,800	-6.2	2,600	-5.0	2,400	-10.0	9,920	62,800
North Dakota 4/	--	--	--	--	--	--	--	--	10,200	29,600
Ohio	6,400	7.8	14,500	6.3	18,300	-0.3	14,300	-2.8	53,500	313,000
Oklahoma	2,300	25.3	2,300	-7.3	3,000	17.5	2,600	22.9	10,200	51,300
Oregon	3,100	1.1	5,100	3.8	5,800	-14.0	3,900	-0.0	17,900	114,000
Pennsylvania	1,700	-9.7	5,800	2.0	6,500	-4.0	4,300	-10.5	18,400	130,000
Rhode Island 5/	--	--	--	--	--	--	--	--	1,050	9,490
South Carolina	2,500	26.9	2,500	-3.2	2,400	-4.6	1,600	-36.2	9,090	42,900
South Dakota	900	-8.2	2,900	13.2	3,600	-16.3	2,300	4.3	9,730	44,200
Tennessee	1,500	-8.6	2,800	-18.4	3,300	46.3	1,500	-27.0	9,120	57,600
Texas	17,400	4.8	18,200	-11.6	18,200	-7.2	16,200	-9.2	70,000	404,000
Utah	7,800	-10.9	9,400	-39.8	11,400	-13.3	6,600	-25.0	35,200	143,000
Vermont	400	4.6	1,600	27.4	1,400	-13.6	1,200	-26.9	4,610	24,500
Virginia	3,000	21.0	3,500	3.0	2,700	-13.8	2,600	-7.7	11,900	67,100
Washington	7,400	-20.2	11,000	-17.1	12,700	-9.6	10,300	12.8	41,400	236,000
West Virginia	200	30.1	600	22.9	700	27.5	400	1.6	1,980	11,700
Wisconsin	3,100	16.0	10,200	-0.7	11,900	10.2	8,800	-19.3	34,100	148,000
Wyoming	1,100	-10.8	700	-37.4	800	-19.5	1,300	-4.7	3,940	19,000
Total	XX	XX	XX	XX	XX	XX	XX	XX	1,100,000	5,090,000

XX Not applicable. -- Zero.

1/ As published in Crushed Stone and Sand and Gravel in the Fourth Quarter of 1999, U.S.G.S. Mineral Industry Surveys.

2/ Data may not add to totals shown because of independent rounding and differences between projected totals by States and regions.

3/ All percentage changes are calculated by using unrounded totals; percentage changes are based on the previous year's corresponding quarter.

4/ State not included in quarterly survey.

5/ Owing to a low number of reporting companies, no production estimates were generated by quarters.

TABLE 6
CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN THE UNITED STATES IN 1999,
BY MAJOR USE 1/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregates (including concrete sand)	237,000	\$1,270,000	\$5.37
Plaster and gunite sands	11,400	62,900	5.51
Concrete products (blocks, bricks, pipe, decorative, etc.)	10,300	67,900	6.60
Asphaltic concrete aggregates and other bituminous mixtures	81,000	456,000	5.63
Road base and coverings	132,000	562,000	4.26
Road stabilization (cement)	3,810	16,700	4.39
Road stabilization (lime)	4,380	16,800	3.84
Fill	76,500	237,000	3.10
Snow and ice control	5,490	21,800	3.97
Railroad ballast	1,070	6,030	5.62
Roofing granules	396	2,710	6.84
Filtration	1,150	6,870	5.98
Other miscellaneous uses	13,700	78,000	5.69
Unspecified: 2/			
Reported	257,000	1,230,000	4.80
Estimated	273,000	1,200,000	4.41
Total	1,110,000	5,250,000	4.73

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

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

TABLE 7
CONSTRUCTION SAND AND GRAVEL SOLD OR USED BY PRODUCERS IN THE UNITED STATES IN 1999,
BY GEOGRAPHIC DIVISION AND MAJOR USE 1/

(Thousand metric tons and thousand dollars)

Region/Division	Concrete aggregates (including concrete sand)		Plaster and gunite sands		Concrete products (blocks, bricks, pipe decorative, etc.)		Asphaltic concrete aggregates and other bituminous mixtures		Road base and coverings 2/	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Northeast:										
New England	7,400	42,500	132	1,030	383	2,420	3,290	21,900	5,410	25,500
Middle Atlantic	16,600	103,000	352	2,120	1,020	9,100	4,190	24,900	6,870	33,400
Midwest:										
East North Central	34,700	143,000	639	3,150	2,000	10,800	16,200	67,600	28,500	104,000
West North Central	21,900	96,900	535	2,810	948	6,730	9,770	38,800	22,600	68,000
South:										
South Atlantic	29,000	145,000	3,080	13,000	1,640	9,250	2,120	8,730	2,370	10,400
East South Central	11,900	55,700	81	483	809	5,770	4,280	23,800	2,990	12,600
West South Central	38,500	200,000	385	2,380	279	1,580	2,630	16,100	5,650	28,200
West:										
Mountain	26,700	145,000	1,750	7,740	1,410	8,880	13,300	71,900	33,900	136,000
Pacific	50,300	342,000	4,450	30,200	1,800	13,400	25,200	182,000	32,100	177,000
Total	237,000	1,270,000	11,400	62,900	10,300	67,900	81,000	456,000	140,000	596,000
Region/Division	Fill		Snow and ice control		Railroad ballast		Other uses		Total	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Northeast:										
New England	3,850	11,500	1,310	5,200	136	977	19,600	102,000	41,500	213,000
Middle Atlantic	4,260	16,400	1,490	6,760	36	267	30,100	163,000	64,900	359,000
Midwest:										
East North Central	18,700	51,100	1,150	3,430	69	282	119,000	519,000	221,000	903,000
West North Central	5,780	12,100	662	2,330	320	1,260	47,600	174,000	110,000	403,000
South:										
South Atlantic	7,540	22,100	W	W	W	W	33,900	166,000	79,900	375,000
East South Central	1,130	2,710	6	34	--	--	25,700	112,000	46,800	213,000
West South Central	12,300	35,700	W	W	W	W	55,200	264,000	115,000	549,000
West:										
Mountain	8,710	23,400	508	2,270	90	603	127,000	553,000	213,000	949,000
Pacific	14,300	61,900	241	1,090	306	1,670	86,800	474,000	215,000	1,280,000
Total	76,500	237,000	5,380	21,100	957	5,060	545,000	2,530,000	1,110,000	5,250,000

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 road and other stabilization (cement and lime).

TABLE 8
CONSTRUCTION SAND AND GRAVEL PRODUCTION IN THE UNITED STATES IN 1999,
BY REGION AND SIZE OF OPERATION 1/

Size range (metric tons)	Northeast				Midwest				South			
	Number of operations	Percent of total	Quantity (thousand metric tons)	Percent of total	Number of operations	Percent of total	Quantity (thousand metric tons)	Percent of total	Number of operations	Percent of total	Quantity (thousand metric tons)	Percent of total
Less than 25,000	358	34.0	3,070	2.9	515	23.6	5,010	1.5	217	19.7	1,990	0.8
25,000 to 49,999	177	16.8	5,750	5.4	358	16.4	12,000	3.6	119	10.8	3,930	1.6
50,000 to 99,999	180	17.1	11,600	10.9	424	19.4	27,800	8.4	196	17.8	12,700	5.3
100,000 to 199,999	169	16.1	21,300	20.0	360	16.5	46,300	14.0	182	16.5	23,300	9.6
200,000 to 299,999	77	7.3	16,900	15.9	186	8.5	40,900	12.3	106	9.6	23,400	9.7
300,000 to 399,999	37	3.5	11,600	10.9	97	4.4	30,500	9.2	73	6.6	22,900	9.5
400,000 to 499,999	11	1.0	4,360	4.1	54	2.5	22,000	6.6	47	4.3	19,100	7.9
500,000 to 599,999	16	1.5	8,120	7.6	47	2.2	23,400	7.1	38	3.5	19,000	7.9
600,000 to 699,999	7	0.7	3,970	3.7	38	1.7	22,300	6.7	33	3.0	19,300	8.0
700,000 to 799,999	5	0.5	3,420	3.2	31	1.4	21,200	6.4	14	1.3	9,370	3.9
800,000 to 899,999	5	0.5	3,870	3.6	18	0.8	13,900	4.2	21	1.9	16,200	6.7
900,000 to 999,999	3	0.3	2,570	2.4	15	0.7	12,800	3.9	8	0.7	6,830	2.8
1,000,000 to 1,499,999	4	0.4	4,320	4.1	24	1.1	25,800	7.8	34	3.1	37,900	15.7
1,500,000 to 1,999,999	1	0.1	W	W	7	0.3	W	W	5	0.5	8,180	3.4
2,000,000 to 2,499,999	1	0.1	W	W	6	0.3	W	W	6	0.5	W	W
2,500,000 to 4,999,999	1	0.1	W	W	2	0.1	W	W	2	0.2	W	W
5,000,000 and over	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,052	100	106,000	100	2,182	100	331,000	100	1,101	100	242,000	100

Size range (metric tons)	West				U.S. total			
	Number of operations	Percent of total	Quantity (thousand metric tons)	Percent of total	Number of operations	Percent of total	Quantity (thousand metric tons)	Percent of total
Less than 25,000	453	25.1	4,310	1.0	1,543	25.1	14,400	1.3
25,000 to 49,999	243	13.5	7,870	1.8	897	14.6	29,600	2.7
50,000 to 99,999	287	15.9	18,700	4.4	1,087	17.7	70,800	6.5
100,000 to 199,999	270	15.0	34,900	8.1	981	16.0	126,000	11.5
200,000 to 299,999	149	8.3	33,300	7.8	518	8.4	115,000	10.5
300,000 to 399,999	97	5.4	30,400	7.1	304	5.0	95,400	8.7
400,000 to 499,999	46	2.6	18,600	4.3	158	2.6	64,100	5.9
500,000 to 599,999	40	2.2	19,400	4.5	141	2.3	69,900	6.4
600,000 to 699,999	32	1.8	19,000	4.4	110	1.8	64,600	5.9
700,000 to 799,999	29	1.6	19,500	4.5	79	1.3	53,500	4.9
800,000 to 899,999	31	1.7	23,700	5.5	75	1.2	57,600	5.3
900,000 to 999,999	12	0.7	10,300	2.4	38	0.6	32,500	3.0
1,000,000 to 1,499,999	55	3.1	57,900	13.5	117	1.9	126,000	11.5
1,500,000 to 1,999,999	24	1.3	38,000	8.9	37	0.6	58,300	4.2
2,000,000 to 2,499,999	13	0.7	26,200	6.1	26	0.4	52,400	2.4
2,500,000 to 4,999,999	19	1.1	W	W	24	0.4	W	W
5,000,000 and over	2	0.1	W	W	2	0.0	W	W
Total	1,802	100	429,000	100	6,137	100	1,110,000	100

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.

TABLE 9
NUMBER OF CONSTRUCTION SAND AND GRAVEL OPERATIONS AND PROCESSING PLANTS IN THE
UNITED STATES IN 1999, BY GEOGRAPHIC DIVISION

Region/Division	Mining operations on land				Dredging operations	Total active operations
	Stationary	Portable	Stationary and portable	No plants or unspecified		
Northeast:						
New England	186	187	38	31	1	443
Middle Atlantic	209	272	43	53	32	609
Midwest:						
East North Central	457	419	97	100	106	1,179
West North Central	260	432	31	65	215	1,003
South:						
South Atlantic	131	48	13	63	135	390
East South Central	121	21	5	18	68	233
West South Central	230	59	16	62	111	478
West:						
Mountain	382	527	81	109	20	1,119
Pacific 1/	324	205	64	57	33	683
Total	2,300	2,170	388	558	721	6,137

1/ An undetermined number of operations leased from the Bureau of Land Management in Alaska are counted as one operation.

TABLE 10
NUMBER OF CONSTRUCTION SAND AND GRAVEL OPERATIONS AND PROCESSING PLANTS IN THE
UNITED STATES IN 1999, BY STATE

State	Mining operations on land				Dredging operations	Total active operations
	Stationary	Portable	Stationary and portable	No plants or unspecified		
Alabama	47	6	--	8	20	81
Alaska 1/	13	9	1	6	3	32
Arizona	56	64	22	9	2	153
Arkansas	37	9	4	3	4	57
California	198	77	33	24	13	345
Colorado	77	142	15	9	9	252
Connecticut	25	21	8	4	--	58
Delaware	3	1	--	3	4	11
Florida	14	7	--	5	35	61
Georgia	10	4	--	3	28	45
Hawaii	1	3	--	1	--	5
Idaho	39	70	4	24	3	140
Illinois	59	34	16	13	40	162
Indiana	69	27	18	7	31	152
Iowa	42	65	4	6	33	150
Kansas	10	36	2	13	50	111
Kentucky	9	2	3	--	14	28
Louisiana	26	7	--	10	66	109
Maine	41	67	5	13	--	126
Maryland	17	2	4	12	1	36
Massachusetts	69	20	11	4	1	105
Michigan	128	174	27	34	9	372
Minnesota	68	154	15	22	3	262
Mississippi	34	5	2	8	23	72
Missouri	52	11	--	2	29	94
Montana	64	65	5	13	1	148
Nebraska	20	21	--	6	100	147
Nevada	27	41	12	11	1	92
New Hampshire	21	33	6	1	--	61
New Jersey	28	5	6	3	13	55
New Mexico	40	45	8	12	--	105
New York	112	238	24	42	9	425
North Carolina	25	20	3	25	29	102
North Dakota	36	66	3	2	--	107
Ohio	131	23	20	24	23	221
Oklahoma	26	7	1	13	25	72
Oregon	42	32	10	6	6	96
Pennsylvania	69	29	13	8	10	129
Rhode Island	10	1	2	--	--	13
South Carolina	23	5	1	8	20	57
South Dakota	32	79	7	14	--	132
Tennessee	31	8	--	2	11	52
Texas	141	36	11	36	16	240
Utah	68	59	10	20	2	159
Vermont	20	45	6	9	--	80
Virginia	28	7	4	7	14	60
Washington	70	84	20	20	11	205
West Virginia	11	2	1	--	4	18
Wisconsin	70	161	16	22	3	272
Wyoming	11	41	5	11	2	70
Total	2,300	2,170	388	558	721	6,137

-- Zero.

1/ An undetermined number of operations leased from the Bureau of Land Management in Alaska are counted as one operation.

TABLE 11
 CONSTRUCTION SAND AND GRAVEL SOLD OR USED BY PRODUCERS IN THE UNITED STATES
 IN 1999, BY REGION AND METHOD OF TRANSPORTATION 1/

(Thousand metric tons)

Region/Division	Truck	Rail	Water	Other	Not transported	Not specified	Total
Northeast:							
New England	15,800	950	19	95	2,800	21,900	41,500
Middle Atlantic	27,100	14	923	185	3,710	33,000	64,900
Midwest:							
East North Central	74,800	154	3,100	1,200	16,300	126,000	221,000
West North Central	43,700	538	3,200	156	11,400	51,100	110,000
South:							
South Atlantic	42,600	1,420	1,070	39	1,950	32,900	79,900
East South Central	18,900	204	297	34	2,700	24,700	46,800
West South Central	49,900	2,060	9	727	3,160	59,200	115,000
West:							
Mountain	60,800	2	--	360	14,500	138,000	213,000
Pacific	103,000	119	4,610	2,700	19,000	85,700	215,000
Total	437,000	5,470	13,200	5,500	75,500	572,000	1,110,000

-- Zero.

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

TABLE 12
U.S. EXPORTS OF CONSTRUCTION SAND AND GRAVEL IN 1999,
BY COUNTRY 1/

(Thousand metric tons and thousand dollars)

Country or Territory	Sand		Gravel	
	Quantity	F.a.s. value 2/	Quantity	F.a.s. value 2/
North America:				
Bahamas, The	5	233	11	63
Canada	312	5,390	298	1,640
Mexico	534	8,590	15	1,860
Netherlands Antilles	(3/)	4	--	--
Trinidad and Tobago	--	--	(3/)	6
Other 4/	41	889	15	244
Total	891	15,100	338	3,810
South America:				
Argentina	4	314	5	735
Ecuador	(3/)	80	--	--
Peru	(3/)	43	(3/)	13
Venezuela	6	323	1	217
Other 5/	1	97	(3/)	22
Total	12	856	6	987
Europe:				
Belgium	22	269	(3/)	20
Germany	250	332	8	629
Spain	(3/)	80	--	--
Sweden	(3/)	134	--	--
United Kingdom	18	1,090	2	153
Other 6/	34	867	3	116
Total	324	2,770	13	918
Asia:				
Hong Kong	(3/)	30	3	576
Japan	37	923	2	98
Korea, Republic of	2	224	(3/)	13
Philippines	2	38	(3/)	9
Singapore	1	127	1	48
Taiwan	1	133	(3/)	11
Thailand	(3/)	81	--	--
Other 7/	2	289	1	168
Total	44	1,840	9	924
Oceania, other 8/	2	118	11	402
Middle East, other 9/	(3/)	111	1	19
Africa, other 10/	(3/)	17	(3/)	19
Grand total	1,270	20,800	378	7,080

-- Zero.

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

2/ Value of material at U.S. port of export; based on transaction price, including all charges incurred in placing material alongside ship.

3/ Less than 1/2 unit.

4/ Includes Barbados, Bermuda, Cayman Islands, Costa Rica, Dominican Republic, Guatemala, Honduras, Jamaica, Nicaragua, Panama, St. Christopher and Nevis, and St. Lucia.

5/ Includes Brazil, Colombia, and Guyana.

6/ Includes Denmark, Finland, France, Ireland, Italy, Latvia, the Netherlands, Norway, Russia, Switzerland, and the Czech Republic.

7/ Includes Brunei, China, India, Indonesia, Malaysia, and Vietnam.

8/ Includes Australia, French Polynesia, and New Zealand.

9/ Includes Israel, Kuwait, Oman, Saudi Arabia, and United Arab Emirates.

10/ Includes Ghana, Nigeria, and South Africa.

Source: U.S. Census Bureau.

TABLE 13
U.S. IMPORTS FOR CONSUMPTION OF CONSTRUCTION SAND AND GRAVEL,
BY COUNTRY 1/

(Thousand metric tons and thousand dollars)

Country or Territory	1998		1999	
	Quantity	C.i.f. value 2/	Quantity	C.i.f. value 2/
Australia	52	1,100	1	754
Bahamas, The	152	1,180	92	611
Canada	781	7,460	1,320	12,000
China	6	281	3	1,140
Dominican Republic	20	245	18	241
France	1	168	1	208
Japan	11	632 r/	6	1,000
Martinique	9	116	6	59
Mexico	8	1,210	375	3,430
Netherlands Antilles	18	213	13	214
United Kingdom	1	256	2	448
Other 3/	61 r/	2,160 r/	78	4,280
Total	1,120	15,000	1,920	24,400

r/ Revised.

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

2/ Value of material at U.S. port of entry; based on purchase price and includes all charges except U.S. import duties in bringing material from foreign country to alongside carrier.

3/ Includes Antigua and Barbuda (1999), Austria (1998), Belgium, Brazil, Denmark, Dominican Republic (1999), Egypt (1998), Equatorial Guinea (1998), Germany, Guyana (1998), Hong Kong (1998), India, Indonesia, Israel (1999), Italy, the Republic of Korea (1998), Kuwait (1999), Nepal (1998), the Netherlands, New Zealand, Norway (1999), Peru (1998), the Philippines, Singapore (1998), South Africa, Spain, Sweden, Taiwan (1999), Trinidad and Tobago (1999), Turkey (1999), and Venezuela.

Source: U.S. Census Bureau.

TABLE 14
 RECYCLED ASPHALT AND CONCRETE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY REGION 1/

Region/Division	Recycled asphalt						Recycled concrete					
	1998			1999			1998			1999		
	Quantity (thousand metric tons)	Value (thousands)	Unit value	Quantity (thousand metric tons)	Value (thousands)	Unit value	Quantity (thousand metric tons)	Value (thousands)	Unit value	Quantity (thousand metric tons)	Value (thousands)	Unit value
Northeast:												
New England	426	\$1,770	\$4.15	160	\$808	\$5.05	263 r/	\$1,370	\$5.21 r/	95	\$381	\$4.01
Middle Atlantic	11 r/	76	6.91 r/	13	72	5.54	312	2,120	6.79	334	2,290	6.86
Midwest:												
East North Central	979 r/	2,980	3.04	1,350	4,580	3.39	439	2,040	4.64	982	4,420	4.50
West North Central	899 r/	3,320	3.69	1,200	5,760	4.80	1,460	5,470	3.75	2,170	7,420	3.42
South:												
South Atlantic	177 r/	738	4.17 r/	577	2,890	5.01	49 r/	331	6.76 r/	387	2,590	6.69
East South Central	285 r/	1,030	3.61 r/	224	682	3.04	--	--	--	--	--	--
West South Central	5	28	5.60	55	65	1.18	--	--	--	7	102	14.57
West:												
Mountain	625 r/	2,360	3.78 r/	728	2,940	4.04	478	1,360	2.85	256	1,170	4.57
Pacific	942 r/ 2/	3,210 2/	3.41 2/	2,080 2/	9,430 2/	4.53 2/	1,450 2/ 3/	5,470 2/ 3/	3.77 2/ 3/	2,450 3/	10,200 3/	4.16 3/
Total	4,360	15,500	3.56	6,400	27,200	4.25	4,450	18,200	4.08	6,680	28,500	4.27

r/ Revised. -- Zero.

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

2/ Includes Alaska.

3/ Includes Hawaii.

TABLE 15
 RECYCLED ASPHALT SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY STATE 1/

State	1998			1999		
	Quantity (thousand metric tons)	Value (thousands)	Unit value	Quantity (thousand metric tons)	Value (thousands)	Unit value
Alabama	27	\$99	\$3.67	W	W	\$3.53
Alaska	W	W	4.56	208	\$985	4.74
Arizona	239	1,230	5.15	W	W	4.13
California	715	2,360	3.30	1,700	7,590	4.47
Colorado	19	82	4.32	91	335	3.68
Connecticut	123	664	5.40	7	31	4.43
Georgia	90	454	5.04	W	W	7.86
Idaho	W	W	1.82	W	W	2.20
Illinois	W	W	9.00	24	34	1.42
Indiana	7	45	6.43	30	43	1.43
Iowa	43	269	6.26	34	200	5.88
Kansas	W	W	4.81	80	777	9.71
Louisiana	3	13	4.33	14	19	1.36
Maine	218	430	1.97	45	169	3.76
Massachusetts	64	603	9.42	37	168	4.54
Michigan	684	1,800	2.63	588	1,280	2.18
Minnesota	807	2,690	3.33	1,020	4,180	4.12
Mississippi	150	495	3.30	100	240	2.40
Montana	31	112	3.61	W	W	7.80
Nevada	72	75	1.04	32	112	3.50
New Hampshire	10	52	5.20	3	18	6.00
New Jersey	W	W	5.33	W	W	6.14
New Mexico	26	157	6.04	277	1,500	5.40
New York	W	W	7.33	W	W	4.14
North Carolina	58	193	3.33	236	974	4.13
North Dakota	5	10	2.00	32	261	8.16
Ohio	17	109	6.41	253	502	1.98
Oklahoma	W	W	5.00	W	W	1.10
Oregon	W	W	3.00	38	227	5.97
Rhode Island	W	W	2.00	W	W	6.41
South Carolina	9	10	1.11	90	385	4.28
South Dakota	45	351	7.80	43	344	8.00
Tennessee	110	434	3.95	W	W	3.49
Utah	170	504	2.96	172	446	2.59
Vermont	8	14	1.75	5	13	2.60
Virginia	W	W	3.81	71	111	1.56
Washington	207	770	3.72	139	627	4.51
Wisconsin	268	997	3.72	453	2,720	6.00
Wyoming	7	36	5.14	W	W	3.00
Total	4,360	15,500	3.56	6,400	27,200	4.25

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

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

TABLE 16
 RECYCLED CONCRETE SOLD OR USED BY SAND AND GRAVEL PRODUCERS IN
 THE UNITED STATES, BY STATE 1/

State	1998			1999		
	Quantity (thousand metric tons)	Value (thousands)	Unit value	Quantity (thousand metric tons)	Value (thousands)	Unit value
Alaska	(2/)	\$3	\$15.47	--	--	--
Arizona	202	529	2.62	W	W	\$16.60
California	1,310 r/	4,810	3.69	2,200	9,070	4.11
Colorado	W	W	5.11	76	286	3.76
Connecticut	W	W	5.49	17	80	4.71
Florida	9	61	6.78	--	--	--
Georgia	8	72	9.00	W	W	7.61
Hawaii	3	22	7.33	4	27	6.75
Idaho	W	W	5.00	W	W	4.50
Illinois	32	183	5.72	134	748	5.58
Indiana	36	148	4.11	109	418	3.56
Iowa	81	551	6.80	87	585	6.72
Kansas	W	W	4.50	5	83	16.60
Maine	25	111	4.44	10	37	3.70
Massachusetts	106	545	5.14	48	205	4.27
Michigan	81	479	5.91	246	833	3.39
Minnesota	1,240 r/	4,250 r/	3.43	1,910	6,050	3.16
Montana	W	W	1.09	W	W	6.92
New Hampshire	7	45	6.43	2	12	6.00
New Jersey	W	W	6.37	W	W	2.44
New Mexico	67	337	5.03	W	W	5.26
New York	273	1,880	6.89	310	2,220	7.16
North Carolina	W	W	4.10	82	283	3.45
North Dakota	W	W	1.11	W	W	4.67
Ohio	78	340	4.36	170	915	5.38
Oregon	W	W	3.33	42	211	5.02
Pennsylvania	W	W	6.05	W	W	3.29
Rhode Island	W	W	2.50	W	W	2.78
South Carolina	W	W	8.62	20	126	6.30
South Dakota	W	W	5.45	W	W	4.41
Texas	--	--	--	7	102	14.57
Utah	W	W	2.22	33	93	2.82
Vermont	9	31	3.44	9	22	2.44
Virginia	--	--	--	W	W	8.33
Washington	141	627	4.45	206	864	4.19
Wisconsin	212	885	4.17	323	1,500	4.66
Total	4,450 r/	18,200 r/	4.08	6,680	28,500	4.27

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

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

2/ Less than 1/2 unit.

FIGURE 1
 PRODUCTION OF CONSTRUCTION SAND AND GRAVEL IN THE UNITED STATES IN 1999, BY GEOGRAPHIC DIVISION

