SAND AND GRAVEL, CONSTRUCTION

By Wallace P. Bolen

Domestic survey data and tables were prepared by Cheryl J. Crawford, statistical assistant.

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 1.12 billion metric tons (Gt) of construction sand and gravel was produced in the United States in 2000; this was a slight increase compared with that of 1999 (table 1). After a decrease in production in 1991, sand and gravel production increased each year for the following 9 years, an indication of the continuous strong demand for construction aggregates in the United States.

In January 2001, the U.S. Geological Survey (USGS) mailed 7,892 construction sand and gravel survey forms to operations throughout the United States; an additional 372 operations that were not mailed survey forms provided information to the USGS. In 2000, 6,204 operations were active, 1,175 operations were idle, and 885 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 2000, of the 6,204 active operations surveyed, 4,272, or 68.9%, responded to the USGS survey. These operations contributed 78.2% of the 1.12 Gt produced in 2000. The 6,204 operations were run by 3,901 companies with 8,224 active sand and gravel pits (tables 9, 10).

Foreign trade of construction sand and gravel remained minor in 2000. Exports increased by about 46% to 2.41 million metric tons (Mt), but the value decreased by 13% to $24.2 million when compared with the 1999 results.

Imports increased by nearly 50% to 2.87 Mt, and their value increased by about 36% to $33.3 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 1.12 Gt.

Legislation and Government Programs

On March 9, the U.S. Army Corps of Engineers published in the Federal Register the new nationwide permit (NWP) program that took effect June 7. The new general conditions in the NWP program affects the use of NWPs in "designated critical resource waters" and in "waters of the U.S." within 100-year floodplains. The Corps modified nine general conditions to the rule; three of these are of particular interest to the sand and gravel industry. The first condition concerns water quality and requires producers seeking NWPs to provide water quality management plans. The second concerns the management of water flows and requires activities to be designed to maintain preconstruction downstream flow conditions. Lastly, the amended general condition on mitigation requires a minimum 1:1 replacement ratio for all wetlands affected and also includes

Construction Sand and Gravel in the 20th Century

In 1900, construction sand and gravel consumption in the United States was probably about 19 million metric tons, but published statistics did not begin until 1905, when the U.S. Geological Survey reported production of about 21 million tons valued at $11.2 million. The average value was $0.53 per ton but ranged from $0.05 to $6.60 per ton. This included sand for such industrial uses as abrasive, foundry, and glassmaking sands. In 1905, production of building sand was reported to be about 9 million tons valued at $4.3 million. These sands included those used for mortar and plaster and sand used as aggregate in making concrete structures. The demand for concrete structures had increased at about the turn of the century. New York, Pennsylvania, Missouri, Indiana, and Ohio were the largest producing States in 1905, and much of the sand came from dredging the Delaware, Mississippi, Ohio, Potomac, and Tennessee Rivers and the Great Lakes. Gravel consumed in 1905 was about 4.9 million tons valued at $1.8 million and was used in concrete, roadmaking, and roofing. The average price for gravel for roofing purposes was $0.75 to $1.00 per ton.

In 2000, construction sand and gravel production was 1.12 billion tons, about 59 times the amount sold and used in 1900. Production of sand and gravel, especially from dredges in the rivers and lakes of the Eastern United States, had been mostly replaced by crushed stone operations and, to a lesser extent, sand and gravel open pits. Most sand and gravel production came from land sources. In 2000, only 12% of all operations were dredging operations, including dredges that worked in man-made lakes. The majority of sand and gravel was produced west of the Mississippi River, but Michigan and Ohio did remain among the top five States in sand and gravel production. Every State produced sand and gravel in 2000, and the largest producing State, California, produced more than seven times what the entire country produced in 1905. The average value of sand and gravel in 2000 was $4.81 per ton and ranged from $3.09 per ton for fill to about $12.35 per ton for roofing granules. The constant dollar average price of sand and gravel, which is the actual price adjusted for inflation, had not increased significantly since 1900 mostly owing to vast improvements in equipment and technologies that resulted in much greater efficiencies and productivity. More than half of the sand and gravel consumed in 2000 was used in road-related construction.

open waters in its coverage area (Aggregates Manager, 2000c).

The National Institute for Occupational Safety and Health has identified noise-induced hearing loss as 1 of the 10 leading work-related diseases and injuries in mining. Hearing loss can cause safety problems in the workplace, as well as diminish the quality of life. The loudness and the duration of noise exposure are both factors in causing hearing loss.

The Mine Safety and Health Administration's (MSHA) new rules on noise exposure went into effect September 13. The new MSHA noise rules require mine operators for the first time to enroll miners in a hearing protection program if they are exposed to an average sound level of 85 decibels or more over an 8-hour period. The program will include training, hearing tests, and providing protectors, such as ear plugs. Training will cover the dangers of noise exposure and the benefits of using protectors and how to use them. Mine operators must offer miners testing and hearing protectors, but the use of hearing protectors at that noise level will be voluntary, as will the hearing tests. (Mine Safety and Health Administration, 1999).

Production

Of the four major geographic regions, the West again led the Nation in the production of construction sand and gravel with 436 Mt, or 39% of the U.S. total (table 2). It was followed by the Midwest with 333 Mt, or 29%; the South with 244 Mt, or 22%; and the Northeast with 109 Mt, or 10%. Production increased slightly in all the major geographic regions compared with that of 1999.

Of the nine geographic divisions, the East North Central led the Nation in the production of construction sand and gravel with 225 Mt, or 20% of the U.S. total, and was followed by the Pacific and Mountain, each with 218 Mt, or 19.5% (table 2; figure 1). Production increased in five of the nine divisions compared with that of 1999—New England, 8.2%; the South Atlantic, 4.3%; the Mountain, 2.3%; the East North Central, 1.8%; and the Pacific, 1.4%. Production decreased in the East South Central, 1.9%; the West North Central, 1.8%; and the Middle Atlantic, 1.5%. Production in the West South Central was unchanged compared with that of 1999.

A review of the production for consumption by size of operation indicates that 35.8% of the construction sand and gravel produced in 2000 came from 1,939 operations reporting between 100,000 and 499,999 metric tons per year (t/yr), 25.2% came from 450 operations reporting between 500,000 and 999,999 t/yr, and 28.7% came from 208 operations reporting more than 1 million metric tons per year (Mt/yr) (table 8).

Hundreds of operations are idled, closed, or abandoned each year, and a similar number are reactivated or opened each year. The changing location of construction and highway projects each year is the major stimulus in decisions to open, idle, or close operations.

The estimated production for consumption by quarter in 2000 indicates that 30% 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 2000, construction sand and gravel was produced in every State (table 4). The leading States, in descending order of tonnage, were California, Texas, Michigan, Arizona, Ohio, Colorado, Washington, Wisconsin, Minnesota, and Nevada. Their combined production represented 55% of the national total. Production increased in 24 States and decreased in 26 States compared with that of 1999. Production increased in 7 of the top 10 States; decreases occurred in Colorado, Ohio, and Washington.

Limited information about the production of construction sand and gravel in foreign countries may be found in the USGS 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.

After receiving approval votes from most of their member companies, effective September 30, 2000, the National Aggregates Association and the National Stone Association merged to form the National Stone, Sand, and Gravel Association. The new association will be the sole organization representing the crushed stone and sand and gravel producing companies at the national level.

During the past 4 years (1997-2000), more than 150 acquisitions have been announced, at a rate of almost one per week. The industry consolidation is expected to continue at a very rapid pace (Aggregates Manager, 2000d).

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

On January 1, Aggregates Industries, Inc., announced that all its divisions would now do business under the name Aggregates Industries, dropping the individual names the divisions had been using, such as CAMAS Minnesota or Bardon Trimount (Aggregates Manager, 2000b). In 2000, Aggregates Industries was the third largest producer of sand and gravel in the United States, after ending 1999 as the fourth largest producer.

CRH plc purchased The Shelley Co. in February. The purchase included 10 sand and gravel pits and 64 fixed or portable asphalt plants (Aggregates Manager, 2000a).

Martin Marietta Materials Inc. purchased B&B Gravel Co. and three other companies in February. The purchase added 3.3 Mt/yr of capacity including sand and gravel and crushed stone (Aggregates Manager, 2000a).

In May, Florida Rock Industries, Inc., bought 12 ready-mix plants, 2 concrete block plants, and 2 sand mines from Southern Concrete Construction Co., Albany, GA. The two sand mines are located in Albany, GA, and Bainbridge, GA (Rock Products, 2000b).

Hanson plc became the largest producer of sand and gravel in the United States in 2000 with the purchase of Pioneer Concrete of America, Inc., in May, 2000. Hanson was the second largest producer in 1999 and switched positions with Vulcan Materials Co., which was the largest producer in 1999 (Rock Products, 2000a).

In March, Anglo American plc announced the purchase of Tarmac plc. In October, Anglo American sold Tarmac America, Inc., to Titan Cement Co. S.A. Titan then agreed to sell the non-Florida construction aggregate parts of Tarmac America to Vulcan Materials. This included crushed stone quarries in South Carolina and Pennsylvania and a distribution operation in Baltimore, MD. Also included were crushed stone quarries, sand and gravel operations, and marine operations in Virginia. Vulcan finalized the purchases of these operations in October and November. The remaining Tarmac America operations owned by Titan Cement will continue to do business under the name of Tarmac America (Pit and Quarry, 2000e).

In June, CSR America, Inc., agreed to purchase the aggregates and cement company FCH Holdings, Inc., and its subsidiary, Florida Crushed Stone Co. (Pit and Quarry, 2000d).

Texas Industries, Inc. (TXI), purchased Central Sand and Gravel Co. Inc. of Jena, LA, in July. Central Sand and Gravel is a primary supplier of asphalt and concrete fine and coarse aggregates in Louisiana (Pit and Quarry, 2000b). Also in July, TXI acquired Collier Sand and Gravel Co., Marble Falls, TX (Rock Products, 2000c). With these acquisitions, TXI became the 15th largest producer of sand and gravel in the United States after finishing as the 24th largest in 1999.

In September, Martin Marietta announced the purchase of the last part of Meridian Aggregates Co. that it did not own (Pit and Quarry, 2000c).

CEMEX S.A. de C.V. completed the purchase of Southdown, Inc., in November. Southdown was the seventh largest producer of sand and gravel in the United States in 1999. In 2000, CEMEX was the sixth largest producer (Pit and Quarry, 2000a).

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 1.12 Gt of construction sand and gravel produced in 2000, 514 Mt, or 45.9% of the total, was for unspecified uses (table 6). Of the remaining 606 Mt, 43.7% was used as concrete aggregates; 22.7%, for road base and coverings and road stabilization; 13.1%, for asphaltic concrete aggregates and other bituminous mixtures; 13.3%, for construction fill; 1.7%, for plaster and gunite sands; 1.6%, 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.

Compared with 1999, nearly 2% more of the sand and gravel produced was reported for specific uses and this must be taken into account when analyzing changes in market consumption. Consumption increased for the following markets: filtration (about 49%), roofing granules (about 18%), concrete aggregates and miscellaneous uses (each about 11%), and fill (about 5%). Consumption decreased by about 42% for road stabilization (lime), by 12.3% for road stabilization (cement), by 4.8% for concrete products, by 2.7% for snow and ice control, and by less than 2% for plaster and gunite sands. Sand and gravel consumption for road base and coverings and railroad ballast remained at 1999 levels.

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 in 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 4.74 Mt of asphalt concrete valued at $21.6 million was recycled by 198 sand and gravel companies in 39 States; this volume represented a 26% decrease compared with that of 1999 (tables 14, 15). Leading States, in descending order of tonnage recycled, were California, Minnesota, and Wisconsin. Leading companies, in order of volume produced, were Granite Construction Co.; Red Flint Group, LLC; Provident Engineering and Development Co.; Memphis Stone and Gravel Co.; and Central Specialties, Inc.

Cement Concrete.—A total of 7.21 Mt of cement concrete valued at $32.6 million was recycled by 182 companies in 35 States; this volume represented a 7.9% increase compared with that of 1999 (tables 14, 16). Leading States, in descending order of tonnage recycled, were California, Minnesota, Michigan, and Wisconsin. Leading companies, in order of volume produced, were Premier Aggregates, Inc.; Vulcan Materials; Custom Crushing and Recycling, Inc.; Red Flint Group; and Provident Engineering and Development.

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 listed in table 11. Reports regarding the method of transportation were provided by the producers for 547 Mt, or 49% of the total U.S. production, of construction sand and gravel. Of this total, 78.8% was transported by truck; 3.1%, by waterway; and 1.6%, by rail. A significant amount of construction sand and gravel produced (about 15%) was not transported but was used at the production site. Because most producers either did not keep records or did not report shipping distances or cost per metric ton per mile, no transportation cost data were available.

Prices

Prices in this chapter are "free on board" (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 2000 average unit price increased by about 1.7% to $4.81 per metric ton, compared with that of 1999 (table 6). By use, the unit prices varied from a high of $12.35 per ton for roofing granules to a low of $3.09 per ton for fill. The largest increases were recorded for roofing granules (80.6%), railroad ballast (18.7%), and road stabilization (cement) (16.2%). Only two markets recorded declines: concrete products (4.2%) and other uses (1.8%).

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 increased by about 69% to 2.14 Mt compared with that of 1999 and the value increased by nearly 2% to $21.2 million (table 12). Mexico was the major destination, receiving about 75% of the total, followed by Canada with nearly 16%. Exports of construction gravel decreased by almost 29% to 270,000 metric tons, and the value decreased by about 57% to $3.03 million. Canada was the major destination, receiving about 84% of the total.

Imports increased by about 49% to 2.87 Mt, and the value increased by about 36% to $33.3 million (table 13). Canada was the major source of imported construction sand and gravel with 56% of the total, followed by Mexico with about 25%.

Outlook

The demand for construction sand and gravel in 2001 is expected to be about equal to that of 2000 in response to a slowing national economy. There are some indications from the quarterly survey that a slowing economy has stalled growth in aggregate demand through the first half of 2001 but some regions of the United States should see increased sales so that overall demand will likely remain close to 2000 levels.

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

For 2001, 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. The cost to acquire existing companies will escalate because of the difficulty of starting greenfield operations. It is estimated that it now takes from 5 to 8 years to put a new resource (greenfield) into production. This includes the time it takes to prove the reserve base, receive zoning and permit approvals, and to deliver and install the necessary equipment. Also, throughout the process, the possibility exists that the project may have to be abandoned because of local opposition and permit or zoning denial; therefore, many companies prefer to buy already permitted active operations rather than face the cost and uncertainties involved with a greenfield operation.

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GENERAL SOURCES OF INFORMATION

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Sand and Gravel.

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

(Thousand metric tons and thousand dollars)

	1996	1997	1998	1999	2000
Sold or used by producers:					
Quantity 2/	914,000 3/	952,000	1,070,000	1,110,000	1,120,000
Value 2/	4,000,000 3/	4,260,000	4,910,000	5,250,000	5,390,000
Exports, value	23,300	22,300	37,800	27,900	24,200
Imports, value	15,800	18,100	15,000	24,400	33,300

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/

	1999				2000			
Region/division	Quantity (thousand metric tons)	Percentage of total	Value (thousands)	Percentage of total	Quantity (thousand metric tons)	Percentage of total	Value (thousands)	Percentage of total
Northeast:								
New England	41,500	3.7	$213,000	4.1	44,900	4.0	$235,000	4.3
Middle Atlantic	64,900	5.9	359,000	6.8	63,900	5.7	349,000	6.5
Midwest:								
East North Central	221,000	20.0	903,000	17.2	225,000	20.0	927,000	17.2
West North Central	110,000	9.9	403,000	7.7	108,000	9.6	396,000	7.3
South:								
South Atlantic	79,900	7.2	375,000	7.2	83,300	7.4	406,000	7.5
East South Central	46,800	4.2	213,000	4.1	45,900	4.1	208,000	3.8
West South Central	115,000	10.4	549,000	10.5	115,000	10.2	569,000	10.5
West:								
Mountain	213,000	19.2	949,000	18.1	218,000	19.5	988,000	18.3
Pacific	215,000	19.4	1,280,000	24.5	218,000	19.4	1,320,000	24.4
Total	1,110,000	100	5,250,000	100	1,120,000	100	5,390,000	100

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 2000, BY QUARTER AND DIVISION 1/

	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/	
Region/division									Quantity (thousand metric tons)	Value (thousands)
Northeast:										
New England	5,400	4.5	12,000	1.3	15,200	9.4	10,300	(1.8)	43,000	$228,000
Middle Atlantic	8,800	6.8	19,600	3.0	22,900	0.4	14,800	(1.1)	66,000	375,000
Midwest:										
East North Central	28,800	7.1	63,600	(0.1)	70,300	(4.2)	53,600	(6.9)	216,000	907,000
West North Central	11,900	16.9	36,700	13.7	40,600	(0.6)	21,700	(19.3)	111,000	427,000
South:										
South Atlantic	19,300	3.3	22,400	1.5	21,800	5.3	20,100	9.1	83,600	412,000
East South Central	9,200	3.8	13,400	2.5	12,500	(16.5)	9,700	(2.2)	44,800	209,000
West South Central	31,400	15.0	32,900	12.1	37,600	24.7	28,900	2.2	131,000	659,000
West:										
Mountain	43,900	(9.8)	63,400	15.3	64,300	8.8	57,700	14.1	229,000	1,040,000
Pacific 4/	40,200	6.2	59,000	13.7	65,800	9.4	57,100	2.4	222,000	1,350,000
Total 2/	199,000	3.7	323,000	8.3	351,000	4.5	274,000	0.4	1,160,000 5/	5,610,000 5/

1/ As published in the Crushed Stone and Sand and Gravel in the Fourth Quarter of 2000 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

State	1999			2000		
	Quantity (thousand metric tons)	Value (thousands)	Unit value	Quantity (thousand metric tons)	Value (thousands)	Unit value
Alabama	15,500	$68,900	$4.45	14,500	$63,700	$4.41
Alaska 2/	9,620	48,500	5.04	10,600	53,500	5.06
Arizona	54,500	296,000	5.42	59,400	304,000	5.12
Arkansas	11,300	53,200	4.72	9,820	48,600	4.95
California	145,000	897,000	6.20	148,000	940,000	6.34
Colorado	45,200	217,000	4.80	43,900	216,000	4.92
Connecticut	6,510	32,400	4.98	8,010	46,900	5.85
Delaware	2,100	10,800	5.14	2,330	12,400	5.34
Florida	27,200	114,000	4.19	24,500	107,000	4.39
Georgia	7,200	30,100	4.18	6,940	28,700	4.13
Hawaii	508	5,840	11.50	607	6,420	10.57
Idaho	15,500	48,200	3.12	17,500	55,700	3.18
Illinois	34,100	147,000	4.32	30,300	132,000	4.35
Indiana	29,500	126,000	4.26	27,900	121,000	4.33
Iowa	13,500	60,600	4.49	12,300	54,100	4.40
Kansas	10,800	31,300	2.91	10,000	28,200	2.81
Kentucky	9,620	32,400	3.37	11,000	36,000	3.28
Louisiana	16,500	81,700	4.96	14,900	76,900	5.17
Maine	8,570	40,300	4.70	9,670	37,600	3.89
Maryland	8,970	56,500	6.29	13,100	84,700	6.48
Massachusetts	12,700	75,200	5.90	13,200	80,100	6.07
Michigan	70,200	245,000	3.48	75,600	269,000	3.55
Minnesota	37,300	142,000	3.80	39,500	158,000	4.00
Mississippi	12,100	58,900	4.88	11,700	60,900	5.21
Missouri	12,400	50,300	4.05	10,700	41,700	3.89
Montana	12,000	50,700	4.22	9,950	40,600	4.08
Nebraska	12,000	40,800	3.40	11,700	39,200	3.34
Nevada	31,700	142,000	4.48	36,800	172,000	4.67
New Hampshire	7,950	36,700	4.62	8,660	41,400	4.78
New Jersey	16,500	91,500	5.55	16,300	85,000	5.22
New Mexico	10,600	53,000	4.99	13,400	66,800	4.97
New York	29,900	152,000	5.10	29,700	154,000	5.18
North Carolina	11,600	62,900	5.43	12,000	59,100	4.93
North Dakota	11,700	33,000	2.83	10,600	27,800	2.62
Ohio	52,000	257,000	4.95	51,200	256,000	5.01
Oklahoma	10,200	41,200	4.04	9,210	35,500	3.85
Oregon	16,900	105,000	6.20	16,500	97,000	5.89
Pennsylvania	18,600	115,000	6.20	17,900	110,000	6.13
Rhode Island	1,310	9,900	7.56	1,240	9,780	7.92
South Carolina	9,660	38,200	3.96	10,300	40,800	3.95
South Dakota	12,400	45,600	3.67	12,800	46,500	3.64
Tennessee	9,640	53,100	5.50	8,760	47,000	5.37
Texas	77,100	373,000	4.83	80,800	408,000	5.04
Utah	39,500	125,000	3.17	30,900	109,000	3.52
Vermont	4,430	18,800	4.24	4,140	18,800	4.55
Virginia	11,300	53,800	4.75	12,100	63,200	5.20
Washington	43,800	227,000	5.18	41,800	221,000	5.29
West Virginia	1,850	9,030	4.88	1,980	9,800	4.94
Wisconsin	35,700	128,000	3.59	39,600	150,000	3.78
Wyoming	4,410	17,200	3.91	6,340	23,800	3.75
Total	1,110,000	5,250,000	4.73	1,120,000	5,390,000	4.81

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 2000, 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	3,600	4.1	4,400	8.3	4,000	(5.0)	3,300	(9.4)	15,400	$69,900
Alaska 4/	--	--	--	--	--	--	--	--	10,000	52,000
Arizona	13,000	(5.8)	16,500	16.2	15,800	16.1	15,100	17.0	60,400	339,000
Arkansas	2,700	11.1	2,700	(6.1)	3,100	(4.7)	2,300	(16.5)	10,800	52,500
California	28,700	7.1	40,500	12.7	47,600	13.9	41,900	3.6	159,000	1,010,000
Colorado	8,100	(9.1)	13,300	15.3	14,200	2.6	11,400	4.9	47,000	231,000
Connecticut	1,200	40.5	2,500	28.0	2,300	13.2	1,500	(12.5)	7,450	37,800
Delaware 5/	--	--	--	--	--	--	--	--	2,080	11,200
Florida	6,600	0.7	7,100	1.0	6,800	(1.2)	6,600	(2.8)	27,100	119,000
Georgia	1,800	4.7	1,900	(6.2)	2,000	5.6	1,900	15.7	7,510	31,900
Hawaii 4/	--	--	--	--	--	--	--	--	500	5,900
Idaho	1,900	(2.2)	4,700	10.1	6,100	6.2	4,200	17.2	16,800	54,100
Illinois	3,900	(1.1)	8,500	(17.8)	9,700	(5.3)	7,600	(19.7)	29,800	132,000
Indiana	6,000	4.8	8,300	(5.7)	8,100	(5.3)	6,300	(1.2)	28,700	125,000
Iowa	1,200	10.8	4,000	0.9	3,800	(23.5)	3,300	(9.3)	12,200	56,300
Kansas	2,000	15.9	3,100	16.7	2,700	(25.6)	2,200	(23.6)	9,920	29,300
Kentucky	1,600	(1.9)	2,700	(4.3)	2,900	6.2	2,400	(5.5)	9,500	32,500
Louisiana	3,700	(5.8)	4,100	(10.7)	5,300	30.6	3,800	(3.9)	16,900	85,400
Maine	500	(13.0)	2,500	5.7	3,700	11.2	2,400	3.9	9,100	43,700
Maryland	2,500	29.3	3,200	34.9	3,100	30.9	2,800	19.5	11,500	74,300
Massachusetts	2,100	3.1	3,500	(7.3)	4,100	18.6	3,600	7.8	13,400	80,600
Michigan	7,000	5.9	22,700	16.4	25,300	0.8	19,000	0.3	74,000	265,000
Minnesota	1,500	(3.0)	13,000	11.3	16,800	9.0	7,100	(19.0)	38,300	150,000
Mississippi	2,100	0.3	3,300	0.0	3,100	(27.5)	2,200	(4.5)	10,800	54,000
Missouri	2,300	22.0	3,600	14.3	3,500	(12.0)	2,400	(27.0)	11,900	49,400
Montana 5/	--	--	--	--	--	--	--	--	12,800	55,700
Nebraska	1,700	23.1	4,500	11.4	4,800	12.5	1,800	(21.6)	12,800	46,100
Nevada	8,300	10.9	9,500	22.2	9,600	21.9	8,600	0.6	36,000	166,000
New Hampshire	1,100	(3.6)	2,000	0.2	3,100	1.7	1,700	(6.7)	7,840	37,400
New Jersey	3,100	1.3	3,500	(19.1)	4,400	(5.1)	3,900	(12.1)	14,900	85,000
New Mexico	2,300	7.2	2,800	8.7	3,200	26.9	2,400	(26.8)	10,800	55,200
New York	3,500	3.0	10,200	17.0	12,400	4.9	7,200	20.4	33,300	174,000
North Carolina	3,400	42.7	2,900	(12.9)	3,000	(2.0)	2,900	3.6	12,200	68,600
North Dakota 4/	--	--	--	--	--	--	--	--	11,700	34,000
Ohio	7,000	11.8	13,400	(5.6)	16,000	(10.2)	12,200	(10.9)	48,600	246,000
Oklahoma	2,500	7.3	2,700	15.4	3,000	0.7	2,000	(22.2)	10,200	41,800
Oregon	2,600	(13.0)	5,100	5.3	5,100	(6.0)	3,900	4.2	16,600	106,000
Pennsylvania	2,100	19.5	6,100	4.1	6,500	(1.3)	3,900	(10.1)	18,700	116,000
Rhode Island 5/	--	--	--	--	--	--	--	--	1,400	11,200
South Carolina	2,400	(11.8)	2,800	(0.4)	2,800	5.9	2,400	53.2	10,300	41,500
South Dakota	1,700	42.7	5,800	60.0	6,000	29.1	2,700	(5.8)	16,300	61,700
Tennessee	1,800	12.8	3,000	0.2	2,700	(23.9)	2,000	25.8	9,420	53,000
Texas	23,500	24.8	24,600	25.3	27,200	38.6	22,000	15.4	97,300	479,000
Utah	4,700	(46.6)	11,800	12.7	11,500	(10.5)	11,600	59.3	39,700	126,000
Vermont	300	(23.9)	1,100	(27.2)	1,400	4.5	1,100	(9.6)	3,880	17,200
Virginia	2,500	(11.8)	3,400	2.2	3,100	19.1	2,900	15.8	11,900	57,600
Washington	8,500	6.7	14,200	21.3	12,300	(8.9)	10,000	(6.0)	45,000	235,000
West Virginia	200	(4.9)	500	(20.0)	500	(23.9)	300	(8.8)	1,530	7,590
Wisconsin	3,900	19.4	11,800	10.1	12,400	(0.9)	9,200	(1.0)	37,200	139,000
Wyoming	1,200	2.5	900	7.5	800	(11.3)	1,200	(21.6)	4,080	16,700
Total	XX	XX	XX	XX	XX	XX	XX	XX	1,160,000	5,610,000

XX Not applicable. -- Zero.

1/ As published in the Crushed Stone and Sand and Gravel in the Fourth Quarter of 2000 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 by quarters were generated.

TABLE 6
CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN THE UNITED STATES IN 2000, BY MAJOR USE 1/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregates (including concrete sand)	265,000	$1,450,000	$5.48
Plaster and gunite sands	10,200	62,800	6.15
Concrete products (blocks, bricks, pipe, decorative, etc.)	9,810	62,000	6.32
Asphaltic concrete aggregates and other bituminous mixtures	79,500	452,000	5.69
Road base and coverings	132,000	568,000	4.31
Road stabilization (cement)	3,340	17,000	5.10
Road stabilization (lime)	2,520	9,880	3.93
Fill	80,800	250,000	3.09
Snow and ice control	5,360	22,000	4.11
Railroad ballast	1,070	7,160	6.67
Roofing granules	471	5,820	12.35
Filtration	1,720	10,500	6.10
Other miscellaneous uses	15,300	85,700	5.59
Unspecified: 2/			
Actual	269,000	1,290,000	4.79
Estimated	245,000	1,100,000	4.50
Total	1,120,000	5,390,000	4.81

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

TABLE 7
CONSTRUCTION SAND AND GRAVEL SOLD OR USED BY PRODUCERS IN THE UNITED STATES IN 2000, BY GEOGRAPHIC DIVISION AND MAJOR USE 1/

(Thousand metric tons and thousand dollars)

	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/	
Region/division	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Northeast:										
New England	7,330	48,900	87	1,020	353	2,050	2,780	17,000	5,720	27,500
Middle Atlantic	13,500	78,300	441	2,660	1,070	7,370	5,130	29,600	6,440	28,800
Midwest:										
East North Central	36,300	156,000	640	3,340	1,980	10,900	14,600	64,400	28,000	106,000
West North Central	24,100	111,000	640	3,150	1,070	5,960	8,850	35,400	23,600	69,900
South:										
South Atlantic	28,300	141,000	1,420	6,580	2,010	9,550	1,980	8,590	4,060	16,400
East South Central	13,300	64,500	340	2,540	583	3,460	4,190	23,400	3,100	13,600
West South Central	41,800	228,000	1,470	8,500	473	2,430	2,380	16,600	4,550	22,300
West:										
Mountain	41,800	229,000	945	8,990	1,100	10,400	13,300	73,300	32,700	136,000
Pacific	58,400	394,000	4,240	26,000	1,170	9,910	26,300	184,000	29,700	174,000
Total	265,000	1,450,000	10,200	62,800	9,810	62,000	79,500	452,000	138,000	595,000

	Fill		Snow and ice control		Railroad ballast		Other uses		Total	
Region/division	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Northeast:										
New England	3,520	11,700	1,320	6,050	176	1,150	23,600	119,000	44,900	235,000
Middle Atlantic	5,820	23,300	1,160	4,610	86	623	30,300	173,000	63,900	349,000
Midwest:										
East North Central	17,300	51,100	1,190	3,800	37	357	124,000	531,000	225,000	927,000
West North Central	6,380	13,600	822	2,910	6	46	42,200	154,000	108,000	396,000
South:										
South Atlantic	7,540	21,900	W	W	W	W	37,800	201,000	83,300	406,000
East South Central	1,150	3,920	4	14	--	--	23,200	96,300	45,900	208,000
West South Central	10,000	22,500	W	W	W	W	54,000	267,000	115,000	569,000
West:										
Mountain	14,600	37,600	524	2,770	232	1,030	113,000	488,000	218,000	988,000
Pacific	14,500	63,900	201	1,180	455	3,210	82,800	462,000	218,000	1,320,000
Total	80,800	250,000	5,370	22,000	1,070	7,160	531,000	2,490,000	1,120,000	5,390,000

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 2000, BY REGION AND SIZE OF OPERATION 1/

Size range (metric tons)	Northeast				Midwest				South			
	Number of operations	Percentage of total	Quantity (thousand metric tons)	Percentage of total	Number of operations	Percentage of total	Quantity (thousand metric tons)	Percentage of total	Number of operations	Percentage of total	Quantity (thousand metric tons)	Percentage of total
Less than 25,000	376	35.6	3,370	3.1	541	24.6	5,350	1.6	237	21.2	2,210	0.9
25,000 to 49,999	163	15.4	5,410	5.0	337	15.3	11,200	3.4	111	9.9	3,750	1.5
50,000 to 99,999	171	16.2	11,100	10.2	437	19.9	28,500	8.6	200	17.9	12,900	5.3
100,000 to 199,999	175	16.6	22,200	20.4	357	16.3	45,700	13.8	192	17.2	25,000	10.2
200,000 to 299,999	78	7.4	16,900	15.6	176	8.0	39,200	11.8	105	9.4	22,900	9.4
300,000 to 399,999	27	2.6	8,370	7.7	88	4.0	27,200	8.2	64	5.7	20,400	8.4
400,000 to 499,999	22	2.1	8,890	8.2	77	3.5	31,100	9.4	45	4.0	18,100	7.4
500,000 to 599,999	17	1.6	8,500	7.8	41	1.9	20,200	6.1	34	3.0	16,900	6.9
600,000 to 699,999	8	0.8	4,650	4.3	44	2.0	26,300	7.9	24	2.2	14,400	5.9
700,000 to 799,999	5	0.5	3,380	3.1	32	1.5	21,400	6.5	23	2.1	15,800	6.5
800,000 to 899,999	6	0.6	4,460	4.1	17	0.8	13,000	3.9	14	1.3	10,700	4.4
900,000 to 999,999	1	0.1	894	0.8	13	0.6	11,200	3.4	12	1.1	10,300	4.2
1,000,000 to 1,499,999	5	0.5	5,770	5.3	19	0.9	20,400	6.1	39	3.5	43,000	17.6
1,500,000 to 1,999,999	2	0.2	W	W	10	0.5	W	W	11	1.0	17,300	7.1
2,000,000 to 2,499,999	1	0.1	W	W	5	0.2	10,300	3.1	4	0.4	W	W
2,500,000 to 4,999,999	--	--	--	--	2	0.1	W	W	1	0.1	W	W
5,000,000 and over	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,057	100	109,000	100	2,196	100	332,000	100	1,116	100	244,000	100

Size range (metric tons)	West				U.S. total			
	Number of operations	Percentage of total	Quantity (thousand metric tons)	Percentage of total	Number of operations	Percentage of total	Quantity (thousand metric tons)	Percentage of total
Less than 25,000	512	27.9	4,230	1.0	1,666	26.9	15,200	1.4
25,000 to 49,999	229	12.5	7,440	1.7	840	13.5	27,800	2.5
50,000 to 99,999	293	16.0	19,200	4.4	1,101	17.7	71,800	6.4
100,000 to 199,999	232	12.6	29,800	6.8	956	15.4	123,000	11.0
200,000 to 299,999	155	8.4	34,600	7.9	514	8.3	114,000	10.1
300,000 to 399,999	87	4.7	27,000	6.2	266	4.3	82,900	7.4
400,000 to 499,999	59	3.2	23,900	5.5	203	3.3	82,000	7.3
500,000 to 599,999	52	2.8	25,700	5.9	144	2.3	71,300	6.4
600,000 to 699,999	34	1.9	20,000	4.6	110	1.8	65,300	5.8
700,000 to 799,999	35	1.9	23,800	5.5	95	1.5	64,500	5.8
800,000 to 899,999	22	1.2	16,900	3.9	59	1.0	45,100	4.0
900,000 to 999,999	16	0.9	13,800	3.2	42	0.7	36,200	3.2
1,000,000 to 1,499,999	53	2.9	57,900	13.3	116	1.9	127,000	11.3
1,500,000 to 1,999,999	19	1.0	30,300	7.0	42	0.7	66,300	5.9
2,000,000 to 2,499,999	17	0.9	33,100	7.6	27	0.4	53,200	4.7
2,500,000 to 4,999,999	17	0.9	52,200	12.0	20	0.3	60,100	5.4
5,000,000 and over	3	0.2	16,000	3.7	3	0.0	16,000	1.4
Total	1,835	100	436,000	100	6,204	100	1,120,000	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 2000, 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	179	195	41	29	1	445
Middle Atlantic	201	266	52	61	32	612
Midwest:						
East North Central	436	466	107	112	108	1,229
West North Central	209	413	39	69	237	967
South:						
South Atlantic	130	46	14	65	141	396
East South Central	115	26	10	19	60	230
West South Central	205	74	16	74	121	490
West:						
Mountain	352	527	92	137	19	1,127
Pacific 1/	318	209	71	74	36	708
Total	2,145	2,222	442	640	755	6,204

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 2000, BY STATE

State	Mining operations on land				Dredging operations	Total active operations
	Stationary	Portable	Stationary and portable	No plant or unspecified		
Alabama	44	11	--	8	18	81
Alaska	11	8	2	6	4	31
Arizona	70	75	21	9	2	177
Arkansas	40	10	2	3	6	61
California	191	80	34	27	14	346
Colorado	75	128	17	23	8	251
Connecticut	28	22	7	2	--	59
Delaware	1	2	--	2	4	9
Florida	18	3	1	5	38	65
Georgia	16	1	--	3	28	48
Hawaii	1	3	--	2	--	6
Idaho	33	72	3	26	3	137
Illinois	52	35	19	12	40	158
Indiana	71	25	18	5	29	148
Iowa	40	60	6	8	35	149
Kansas	12	30	3	14	51	110
Kentucky	9	3	3	1	14	30
Louisiana	16	8	--	9	66	99
Maine	39	77	5	12	--	133
Maryland	18	7	4	10	2	41
Massachusetts	64	15	10	3	1	93
Michigan	134	186	31	37	7	395
Minnesota	56	148	19	22	5	250
Mississippi	35	4	5	7	18	69
Missouri	38	11	--	1	30	80
Montana	44	67	10	11	1	133
Nebraska	9	14	1	4	116	144
Nevada	28	37	15	10	--	90
New Hampshire	23	36	8	2	--	69
New Jersey	29	6	5	3	13	56
New Mexico	36	43	9	19	--	107
New York	108	229	35	48	11	431
North Carolina	24	20	3	21	30	98
North Dakota	26	64	4	1	--	95
Ohio	110	33	18	30	28	219
Oklahoma	16	9	2	13	31	71
Oregon	39	32	12	17	4	104
Pennsylvania	64	31	12	10	8	125
Rhode Island	8	1	3	--	--	12

See footnote at end of table.

TABLE 10--Continued
NUMBER OF CONSTRUCTION SAND AND GRAVEL OPERATIONS AND PROCESSING PLANTS IN THE UNITED STATES IN 2000, BY STATE

State	Mining operations on land				Dredging operations	Total active operations
	Stationary	Portable	Stationary and portable	No plant or unspecified		
South Carolina	17	4	1	9	21	52
South Dakota	28	86	6	19	--	139
Tennessee	27	8	2	3	10	50
Texas	133	47	12	49	18	259
Utah	53	67	14	18	2	154
Vermont	17	44	8	10	--	79
Virginia	25	5	5	13	14	62
Washington	76	86	23	22	14	221
West Virginia	11	4	--	2	4	21
Wisconsin	69	187	21	28	4	309
Wyoming	13	38	3	21	3	78
Total	2,145	2,222	442	640	755	6,204

-- Zero.

TABLE 11
CONSTRUCTION SAND AND GRAVEL SOLD OR USED BY PRODUCERS IN THE UNITED STATES IN 2000, BY REGION AND METHOD OF TRANSPORTATION 1/

(Thousand metric tons)

Region/division	Truck	Rail	Water	Other	Not transported	Not specified	Total
Northeast:							
New England	15,500	1,090	--	123	3,220	25,000	44,900
Middle Atlantic	27,900	18	876	343	3,290	31,500	63,900
Midwest:							
East North Central	73,700	299	3,990	1,190	14,600	131,000	225,000
West North Central	42,800	540	4,030	25	13,700	46,600	108,000
South:							
South Atlantic	43,000	1,870	467	101	2,270	35,600	83,300
East South Central	19,500	121	1,280	42	1,610	23,400	45,900
West South Central	43,500	2,900	2,510	525	7,390	57,900	115,000
West:							
Mountain	71,600	440	--	373	13,900	132,000	218,000
Pacific	93,900	1,220	3,580	5,990	22,800	90,200	218,000
Total	431,000	8,490	16,700	8,710	82,700	573,000	1,120,000

-- 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 2000, 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	17	653	1	23
Canada	335	6,180	228	1,410
Mexico	1,610	3,760	1	124
Netherlands Antilles	3	34	2	19
Trinidad and Tobago	(3/)	3	--	--
Other 4/	3	391	(3/)	32
Total	1,970	11,000	232	1,610
South America:				
Argentina	(3/)	117	1	84
Ecuador	(3/)	332	--	--
Peru	(3/)	38	--	--
Venezuela	5	285	(3/)	66
Other 5/	4	199	(3/)	1
Total	9	971	1	151
Europe:				
Belgium	2	108	(3/)	46

See footnotes at end of table.

TABLE 12--Continued
U.S. EXPORTS OF CONSTRUCTION SAND AND GRAVEL IN 2000, 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/
Europe--Continued:				
Germany	42	917	(3/)	23
Spain	--	--	2	70
Sweden	(3/)	91	--	--
United Kingdom	25	1,270	1	78
Other 6/	41	725	6	242
Total	110	3,110	9	459
Asia:				
Hong Kong	(3/)	109	9	348
Japan	2	436	1	56
Korea, Republic of	(3/)	377	--	--
Philippines	(3/)	20	--	--
Singapore	1	34	--	--
Taiwan	1	2,060	2	64
Thailand	(3/)	82	--	--
Other 7/	36	741	1	39
Total	40	3,860	13	507
Oceania, other 8/	1	103	6	219
Middle East, other 9/	3	1,640	(3/)	30
Africa, other 10/	2	482	9	51
Grand total	2,140	21,200	270	3,030

-- 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, Belize, Bermuda, British Virgin Islands, Costa Rica, the Domincan Republic, Giatemale, Honduras, Jamaica, Panama, and Saint Kitts and Nevis.
5/ Includes Brazil, Chile, Colombia, and Suriname.
6/ Includes Austria, Croatia, Finland, France, Greece, Ireland, Italy, Kazakhstan, Latvia, the Netherlands, Norway, Poland, Russia, and Switzerland.
7/ Includes Brunei, China, India, Indonesia, and Pakistan.
8/ Includes Australia and New Zealand.
9/ Includes Israel and Saudi Arabia.
10/ Includes Angola, Congo, Egypt, Equatorial Guinea, 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	1999		2000	
	Quantity	C.i.f. value 2/	Quantity	C.i.f. value 2/
Antigua and Barbuda	21	258	45	488
Australia	1	754	15	2,270
Bahamas, The	92	611	111	448
Canada	1,320	12,000	1,620	15,500
China	3	1,140	109	1,310
Dominica	18	241	11	189
Dominican Republic	25	266	161	668
Japan	6	1,000	14	1,500
Martinique	6	59	10	102
Mexico	375	3,430	711	4,360
Netherlands Antilles	13	214	4	50
Norway	24	1,210	35	1,210
United Kingdom	2	448	2	1,390
Other 3/	9	2,750	12	3,770
Total	1,920	24,400	2,870	33,300

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 alongide carrier.
3/ Includes France, Germany, Israel, Malaysia (2000), New Zealand, the Philippines, South Africa, Spain, 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					
	1999			2000			1999			2000		
	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	160	$808	$5.05	283	$920	$3.25	95	$381	$4.01	190	$970	$5.11
Middle Atlantic	13	72	5.54	54	298	5.52	334	2,290	6.85 r/	407	2,310	5.68
Midwest:												
East North Central	1,350	4,580	3.40 r/	827	4,100	4.96	982	4,420	4.50	1,870	7,270	3.88
West North Central	1,200	5,760	4.79 r/	873	4,000	4.59	2,170	7,420	3.43 r/	2,100	7,910	3.76
South:												
South Atlantic	577	2,890	5.01	300	1,450	4.82	387	2,590	6.69	224	906	4.04
East South Central	224	682	3.04	231	888	3.84	--	--	--	--	--	--
West South Central	55	65	1.18	34	412	12.12	7	102	14.57	19	230	12.11
West:												
Mountain	728	2,940	4.04	761	3,000	3.95	256	1,170	4.57	259	1,130	4.35
Pacific	2,080 2/	9,430 2/	4.53 2/	1,370 2/	6,520 2/	4.76 2/	2,450 3/	10,200 3/	4.14 r/ 3/	2,130 3/	11,900 3/	5.57 3/
Total	6,400	27,200	4.26 r/	4,740	21,600	4.56	6,680	28,500	4.27	7,210	32,600	4.52

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	1999			2000		
	Quantity (thousand metric tons)	Value (thousands)	Unit value	Quantity (thousand metric tons)	Value (thousands)	Unit value
Alabama	30	$106	$3.53	--	--	--
Alaska	208	985	4.74	191	$919	$4.81
Arizona	W	W	4.13	76	196	2.58
California	1,700	7,590	4.47	987	4,500	4.56
Colorado	91	335	3.68	174	958	5.51
Connecticut	7	31	4.43	2	10	5.00
Florida	--	--	--	27	450	16.67
Georgia	W	W	7.86	W	W	6.11
Idaho	W	W	2.20	81	178	2.20
Illinois	24	34	1.42	21	75	3.57
Indiana	30	43	1.43	50	154	3.08
Iowa	34	200	5.88	20	77	3.85
Kansas	80	777	9.71	W	W	9.96
Louisiana	14	19	1.36	W	W	12.41
Maine	45	169	3.76	143	494	3.45
Massachusetts	37	168	4.54	115	259	2.25
Michigan	588	1,280	2.18	56	226	4.04
Minnesota	1,020	4,180	4.12	741	2,970	4.01
Mississippi	100	240	2.40	100	330	3.30
Montana	W	W	7.80	10	61	6.10
Nevada	32	112	3.50	65	289	4.45
New Hampshire	3	18	6.00	2	14	7.00
New Jersey	W	W	6.14	40	237	5.93
New Mexico	277	1,500	5.40	W	W	4.22
New York	7	29	4.14	15	61	4.07
North Carolina	236	974	4.13	140	528	3.77
North Dakota	32	261	8.16	W	W	5.41
Ohio	253	502	1.98	125	752	6.02
Oklahoma	W	W	1.10	W	W	5.00
Oregon	38	227	5.97	62	468	7.55
Rhode Island	W	W	6.41	9	80	8.89
South Carolina	90	385	4.28	45	237	5.27
South Dakota	43	344	8.00	41	313	7.63
Tennessee	W	W	3.49	W	W	4.23
Utah	172	446	2.59	W	W	3.01
Vermont	5	13	2.60	14	63	4.50
Virginia	71	111	1.56	69	116	1.68
Washington	139	627	4.51	128	623	4.87
Wisconsin	453	2,720	6.00	575	2,890	5.03
Wyoming	W	W	3.00	71	348	4.90
Total	6,400	27,200	4.26 r/	4,740	21,600	4.56

r/ Revised. W Withheld to avoid disclosing company proprietary data, except unit value; included in "Total." -- Zero
1/ Data are rounded to no more than three significant digits, except unit value; may not add totals shown.

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

State	1999			2000		
	Quantity (thousand metric tons)	Value (thousands)	Unit value	Quantity (thousand metric tons)	Value (thousands)	Unit value
Alaska	--	--	--	W	W	$5.33
Arizona	W	W	$16.60	--	--	--
California	2,200	$9,070	4.11	1,910	$10,800	5.67
Colorado	76	286	3.76	121	528	4.36
Connecticut	17	80	4.71	2	9	4.50
Florida	--	--	--	18	60	3.33
Georgia	W	W	7.61	--	--	--
Hawaii	4	27	6.75	4	31	7.75
Idaho	W	W	4.50	W	W	1.50
Illinois	134	748	5.58	211	1,080	5.10
Indiana	109	418	3.56	20	33	1.65
Iowa	87	585	6.72	109	711	6.52
Kansas	5	83	16.60	5	45	9.00
Louisiana	--	--	--	W	W	8.73
Maine	10	37	3.70	W	W	3.60
Maryland	--	--	--	W	W	2.79
Massachusetts	48	205	4.27	110	533	4.85
Michigan	246	833	3.39	842	2,320	2.75
Minnesota	1,910	6,050	3.16	1,760	6,510	3.69
Montana	W	W	6.92	W	W	6.11
New Hampshire	2	12	6.00	46	214	4.65
New Jersey	W	W	2.44	74	476	6.43
New Mexico	W	W	5.26	W	W	5.84
New York	310	2,220	7.16	333	1,840	5.51
North Carolina	82	283	3.45	31	102	3.29
North Dakota	W	W	4.67	(2/)	1	4.51
Ohio	170	915	5.38	234	1,260	5.38
Oregon	42	211	5.02	33	235	7.12
Pennsylvania	W	W	3.29	--	--	--
Rhode Island	W	W	2.78	23	180	7.83
South Carolina	20	126	6.30	W	W	6.90
South Dakota	W	W	4.41	229	651	2.84
Texas	7	102	14.57	10	134	13.40
Utah	33	93	2.82	77	253	3.29
Vermont	9	22	2.44	W	W	2.67
Virginia	W	W	8.33	W	W	8.13
Washington	206	864	4.19	175	724	4.14
Wisconsin	323	1,500	4.66	566	2,580	4.56
Total	6,680	28,500	4.27	7,210	32,600	4.52

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 2000, BY GEOGRAPHIC DIVISION