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2013 Minerals Yearbook

SAND AND GRAVEL, CONSTRUCTION [ADVANCE RELEASE]

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Sand and Gravel, Construction

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A total of 850 million metric tons (Mt) of construction sand and gravel was produced in the United States in 2013. Although this was an increase of 33 Mt, or 4% from the revised production of 2012, production was 37% less than the peak production of 1.34 billion metric tons in 2006. One-half of the States had increased production in 2013 compared with that of 2012. Some regions had increased demand, especially in areas that experienced a boom in natural gas and oil production, and (or) in areas that had been particularly hard hit during the recent recession and have reported improvements in housing construction. Imports of sand and gravel increased by 3% compared with imports from 2012. Exports decreased by 86% when compared with those in 2012.

Construction sand and gravel is a traditional basic building material and is one of the earliest materials humans used for dwellings and later to build paths, roadways, and other constructs. Sand and gravel is very accessible and is widely used throughout the United States and the world. As sand and gravel became less available owing to local resource constraints or economic conditions, builders began to crush bedrock to produce a manufactured sand and gravel often referred to as crushed stone. Sand and gravel and crushed stone combined are defined as construction aggregates. The crushed stone industry is reviewed in a separate chapter of the U.S. Geological Survey (USGS) Minerals Yearbook, volume I, Metals and Minerals; both of these mineral commodities are usually included in reviews of national, State, or local aggregate industries. All percentages in this report were computed using unrounded data.

The U.S. Census Bureau reported that the value of construction put in place increased by 7% in 2013 compared with that of 2012. The reported figures by the U.S. Census Bureau have not translated to a corresponding increase in annual sand and gravel consumption (U.S. Census Bureau, undated). The value of construction put in place for 2013 was still 22% lower than that of 2006, which was the alltime high for the value of construction put in place as well for construction sand and gravel production.

Some information about the production of construction sand and gravel in foreign countries can be found in the USGS Minerals Yearbook, volume III, Area Reports—International. For nonreporting countries, estimates of sand and gravel and crushed stone production trends can be based on indirect indicators, such as the levels of asphalt and cement consumption.

Production

In the United States in 2013, 6,346 construction sand and gravel operations were known to be active (table 6A), an additional 1,079 operations were reported or assumed to be idle since 2012, and 378 operations either were reported to be closed or were assumed to be permanently shut down. Of the 6,346 active operations, 152 were classified as sales or distribution yards only; a sales yard is defined as a fixed location that receives sand and gravel from a distant source and sells it at the yard. Additionally, 472 operations were reported to be dredging operations. A small number of the idle sand and gravel operations reported recycling of asphalt and portland cement concrete.

A review of the data provided by the U.S. Mine Safety and Health Administration (MSHA) identified 378 newly opened or previously unaccounted for sand and gravel locations that reported at least 150 employee hours of activity during 2013. Production data were estimated for these newly recognized operations and included in the 2013 data. In 2013, of the 6,346 active operations surveyed, 2,876 or 45%, responded to the USGS canvass. Their total production represented 56% of the 850 Mt produced in 2013. Estimates for operations that did not report were based on prior years' data and MSHA employee hour reports. In 2013, the statistical analysis used to compile estimates for production using MSHA mine employee data was revised to specify production rates by State. Some variations for the 2013 data can be attributed to this revised methodology.

Of the four major geographic regions, the West continued to lead the Nation in the production of construction sand and gravel in 2013 with 293 Mt, or 35% of the U.S. total (table 2). The Midwest ranked a close second with 268 Mt, or 32%; the South produced 198 Mt, or 23%; and the Northeast produced 90 Mt, or 11%. Compared with that of 2012, production increased in all but the South, where production decreased slightly.

Of the nine geographic divisions, the Mountain division led the Nation in the production of construction sand and gravel in 2013 with 156 Mt, or 18% of the U.S. total, and was followed by the West North Central with 141 Mt, or 17%; the Pacific with 138 Mt, or 16%; and the East North Central with 127 Mt, or 15% (table 2). The largest production increase was in the Mountain division, which rose by 10% compared with that of 2012. Production also increased in the Pacific (9%), West North Central (6%), Middle Atlantic (4%), South Atlantic (3%), and East North Central (slightly) divisions. Production decreased in the West South Central (4%), East South Central (3%), and New England (slightly) divisions.

In 2013, construction sand and gravel was produced in every State (table 3). The leading States with production greater than 25 Mt were, in descending order of tonnage, California, Texas, Minnesota, Colorado, Michigan, Arizona, North Dakota, Wisconsin, Washington, Ohio, and New York. The combined production of these 11 States represented about 54% of the national total. In 2013, production increased in 25 States and decreased in 25 States compared with that of 2012. Production increases of greater than 15% were reported in nine States—Nevada (43%), South Dakota (33%), Missouri (32%), Colorado (24%), New Jersey (23%), Kentucky (23%), North Carolina

(22%), Massachusetts (19%), and Idaho (16%). Production decreases of 15% or more were reported in four States—Georgia (21%), Arkansas (19%), New Mexico (18%), and West Virginia (16%). Statistical analysis was conducted on a State level rather than a national level, as it was conducted in 2012; this may have accounted for some unusually large swings in production.

A review of the production of construction sand and gravel for consumption by size of operation indicated that 46% of the total production came from 1,927 operations having between 100,000 and 499,999 metric tons (t) of production in 2013, 22% of the construction sand and gravel produced came from 298 operations having between 500,000 and 999,999 t of production, and 18% came from 96 operations having 1 Mt or more of production. Most operations (4,025, or 63% of total operations) produced less than 100,000 t in 2013, accounting for 15% of total production (table 6A). In 2013, the combined production of the top 10 companies was about 201 Mt, or about 24% of the national total. The top 100 producers of construction sand and gravel in the United States in 2013 had a combined production of 435 Mt (51% of the national total).

Consumption

Domestic apparent consumption of construction sand and gravel, which is defined as production for consumption (sold or used) plus total imports minus total exports, was 854 Mt. In addition to this, at least 41 Mt of asphalt and portland cement concrete was recycled during 2013. Production of construction sand and gravel reported to the USGS by producers was material that was sold or used by the companies. Stockpiled production is not reported until it is sold or consumed by the producer. Because no surveys of consumers 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: Actual." The estimated production of nonrespondents was reported under "Unspecified: Estimated."

Of the 850 Mt of construction sand and gravel produced in 2013, 66% was reported or estimated without a breakdown by end use (tables 4, 5). Of the remaining 286 Mt, 44% was used as concrete aggregate; 25% was used for road base and coverings; 13% for construction fill; 11% for asphaltic concrete aggregate and other bituminous mixtures; about 1% each for concrete products, plaster and gunite sands, road stabilization, and snow and ice control; and the remainder was used for golf course maintenance sand, filtration, railroad ballast, roofing granules, and many other miscellaneous uses.

The reported consumption patterns for construction sand and gravel exclude the unspecified uses. In any marketing or use-pattern analysis based on quantity distribution, the total quantities included in unspecified uses may be distributed among the reported use categories by applying the above percentages.

Additional information regarding production of construction sand and gravel by major uses in each State and State district can be found in the USGS Minerals Yearbook, volume II, Area Reports—Domestic.

Recycling

The USGS collects recycling statistics from construction and demolition companies. Not all of the companies surveyed responded to the request for information on asphalt and portland cement concrete recycling, and the data shown in tables 10 and 11 do not include estimates for nonrespondents. These data have been combined with recycling data received from aggregate mining companies, including construction sand and gravel and crushed stone producers. Recycling in this industry generally refers to the crushing, screening, and reuse of asphalt and portland cement concretes. Aggregates, construction, and demolition companies and related asphalt and ready-mix companies are often involved in construction projects during which they collect and reuse the materials at the site. Sometimes construction companies haul their materials to a recycling location where the asphalt and (or) portland cement concrete is processed for reuse.

Recycled Asphalt Concrete.—In 2013, 19.4 Mt of asphalt concrete valued at $167 million was reported as recycled by aggregate, construction, and demolition companies in 49 States (table 10). The leading States, all with more than 500,000 t of recycled asphalt concrete were, in descending order of tonnage recycled, California, Illinois, Minnesota, Pennsylvania, North Carolina, Michigan, New York, Kansas, Connecticut, and Utah. Their combined total was 11.8 Mt, or 61% of the total recycled asphalt concrete.

Recycled Portland Cement Concrete.—In 2013, about 21.2 Mt of portland cement concrete valued at $154 million was reported as recycled in 47 States (table 11). The leading States, all with more than 500,000 t of recycled portland cement concrete were, in descending order of tonnage recycled, Texas, California, Illinois, Michigan, Iowa, Minnesota, Virginia, Wisconsin, Colorado, and Florida. Their combined total was 15.8 Mt, or 74% of the total recycled portland cement concrete.

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 division and the total United States. Information regarding the method of transportation were provided by the producers of 266 Mt, or 31% of the total U.S. production of construction sand and gravel in 2013. Of this, 81% was transported by truck; 4%, by waterway; 1%, other; and less than 1% by rail (table 7). The "other" category was thought to indicate customer pickup or was unknown by the respondent but was likely transported by truck. The remainder of the 266 Mt (about 14%) was not transported and was used at or near the production site, probably for asphalt or portland cement concrete production.

Prices

Prices discussed in this chapter are average unit values and are free on board (f.o.b.) plant, usually at the first point of sale or for captive use. This does not include transportation from the plant or yard to the consumer. It normally includes all costs of mining, processing, in-plant transportation, overhead, and profit.

The 2013 average unit value of construction sand and gravel decreased slightly to $7.61 per metric ton compared with the revised unit value for 2012. By use, the prices varied from a high of $15.08 per ton for railroad ballast to a low of $5.29 per ton for fill (table 4). Nearly all categories for construction sand and gravel use showed increased unit values in 2013. The largest increases in price were recorded for sand and gravel used for railroad ballast (33%); golf course maintenance sand (31%); road stabilization, lime (17%); concrete products (15%); road stabilization, cement (14%); concrete aggregate (9%); and snow and ice control (9%). The largest decreases were for filtration (23%) and road base and coverings (3%). The large increase for railroad ballast may be owing to 9 States with projected railway construction starts and 12 States with projected railway project openings in 2013 (Freemark, 2013).

The States with the highest unit value per metric ton of construction sand and gravel were, in descending order, Hawaii ($18.85), Rhode Island ($12.31), Maryland ($11.59), Virginia ($11.17), Louisiana ($10.32), and California ($10.12). The States with the lowest unit value of construction sand and gravel per metric ton were, in ascending order, South Dakota ($4.62), Minnesota ($4.64), Nevada ($5.09), Kentucky ($5.28), and Wisconsin ($5.30). The construction sand and gravel unit value decreased in 22 States and increased in 28 States (table 3). The States with the largest increases in unit value were, in descending order, Indiana (29%), North Carolina (15%), Oklahoma (11%), North Dakota (10%), Alabama (9%), Rhode Island (9%), Kentucky (8%), Georgia (7%), Texas (7%), New Hampshire (7%), and Wisconsin (6%). The States with the largest decreases in unit value were, in descending order, Nevada (26%), Wyoming (12%), Idaho (10%), Delaware (9%), California (7%), Minnesota (7%), Louisiana (7%), and New Jersey (6%). Owing to the revised statistical analysis, some of the overall percent changes were larger than expected.

Foreign Trade

According to the U.S. Census Bureau, exports of construction sand and gravel decreased by 86% compared with that of 2012 to 59,000 t, and the value decreased by 38% to $15.7 million (tables 1, 12). Canada, which was the leading destination, received 54% of the total sand and gravel exports, followed by Mexico (8%) and the United Kingdom (8%). The average unit value of sand and gravel exports in 2013 increased to $266 per ton, which was more than four times the $60 per ton in 2012. The dramatic increase in unit value may be the result of some higher grade sand and gravel or other materials being misclassified as construction sand and gravel.

In 2013, imports of construction sand and gravel increased by 3% to 4.2 Mt and the value increased by 14% to $67.5 million (tables 1, 13). Canada remained the leading source of construction sand and gravel imports, with 90% of the total. Mexico supplied about 7% of imports, and the remaining 3% was supplied by a few other countries. The average unit value of sand and gravel imports in 2013 was $15.98 per ton, up from $14.41 per ton in 2012. Imports have become a significant source for sand and gravel in some areas of the country but remain a tiny fraction of total consumption.

Outlook

Many economic indicators show an improving economy in the United States, and 2014 sand and gravel consumption is expected to increase compared with that of 2013. Data from the 2014 USGS quarterly survey of U.S. aggregates producers projected a 7% increase in sales of sand and gravel compared with those of 2013, based on a sample of the leading sand and gravel producers in the United States.

Although unit values decreased slightly in 2013, increasing demand from many sectors and higher fuel costs could keep some upward pressure on sand and gravel production costs for 2014. Higher costs are likely to continue in and near metropolitan areas because, as nearby resources are depleted, more aggregates will be transported from distant sources with the accompanying extra transportation cost.

The Highway Trust Fund has the potential to create increased demand if the U.S. Congress passes a long-term highway bill (Congressional Budget Office, 2014). States could see an increase in the demand for road building materials, potentially driving prices of materials higher. Pending a final ruling from the U.S. Environmental Protection Agency, the Clean Water Act has the potential to increase the cost of mining operations. Rulings were expected in 2014, but the regulatory process could take up to 2 years for rulings on enforcement and application of the Act (U.S. Environmental Protection Agency, undated).

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GENERAL SOURCES OF INFORMATION

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TABLE 1
SALIENT U.S. CONSTRUCTION SAND AND GRAVEL STATISTICS[1]

(Thousand metric tons and thousand dollars)

	2009	2010	2011	2012	2013
Sold or used by producers:[2]					
Quantity	839,000	807,000	809,000 r	816,000 r	850,000
Value	6,300,000	5,890,000	6,070,000 r	6,250,000 r	6,470,000
Recycled:[3]					
Quantity	28,500	26,400	27,300	31,900 r	40,600
Value	264,000	201,000	214,000	249,000 r	322,000
Exports:					
Quantity	439	381	357	426	59
Value	23,100	22,600	28,200	25,500	15,700
Imports:					
Quantity	2,980	2,670	3,440	4,110	4,230
Value	66,100	95,900	64,800	59,200	67,500

rRevised.
[1]Data are rounded to no more than three significant digits.
[2]Puerto Rico is excluded from all sand and gravel statistics.
[3]Asphalt and portland cement concrete recycled by construction, demolition, and aggregate mining companies.

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

	2012				2013			
Region/division	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	37,500 r	4.6	$318,000 r	5.1	36,900	4.3	$317,000	4.8
Middle Atlantic	51,500 r	6.3	454,000	7.3	53,600	6.2	468,000	7.1
Midwest:								
East North Central	124,000	15.3	766,000	12.4	127,000	15.2	832,000	13.9
West North Central	133,000 r	16.3	784,000 r	12.6	141,000	17.2	851,000	13.2
South:								
South Atlantic	49,300	6.0	409,000	6.6	50,600	5.9	428,000	6.5
East South Central	33,300	4.1	225,000	3.6	32,400	3.8	220,000	3.4
West South Central	119,000	14.6	933,000 r	14.9	115,000	13.3	929,000	14.2
West:								
Mountain	142,000	17.5	1,110,000	17.9	156,000	18.1	1,150,000	17.5
Pacific	127,000 r	15.5 r	1,250,000 r	19.9 r	138,000	16	1,280,000	19.6
Total	816,000 r	100	6,250,000 r	100	850,000	100	6,470,000	100

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

TABLE 3
CONSTRUCTION SAND AND GRAVEL SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY STATE[1]

State	2012			2013		
	Quantity (thousand metric tons)	Value (thousands)	Unit value	Quantity (thousand metric tons)	Value (thousands)	Unit value
Alabama	9,060	$54,500	$6.01	8,450	$55,400	$6.55
Alaska	7,400 r	52,200 r	7.05 r	8,090	58,500	7.23
Arizona	34,100	301,000	8.83	33,900	289,000	8.52
Arkansas	7,980	68,200	8.56	6,460	54,400	8.43
California	80,100 r	875,000 r	10.94 r	87,900	890,000	10.12
Colorado	27,700	209,000	7.53	34,500	254,000	7.37
Connecticut	5,280	49,600	9.39	4,770	45,200	9.48
Delaware	1,820	15,600	8.58	1,580	12,400	7.84
Florida	13,700	111,000	8.10	15,500	131,000	8.44
Georgia	5,410	33,800	6.24	4,260	28,500	6.69
Hawaii	786	15,000	19.06	679	12,800	18.85
Idaho	10,000	73,800	7.38	11,600	77,300	6.67
Illinois	16,700	113,000	6.79	16,400	117,000	7.09
Indiana	18,500	107,000	5.81	17,000	128,000	7.48
Iowa	13,600	89,200	6.54	12,900	85,700	6.63
Kansas	9,920 r	53,800 r	5.43 r	9,340	52,800	5.66
Kentucky	6,610	32,400	4.90	8,110	42,800	5.28
Louisiana	18,800 r	208,000 r	11.05	17,900	185,000	10.32
Maine	8,500	62,700	7.37	7,450	54,200	7.28
Maryland	7,730	90,700	11.75	6,650	77,000	11.59
Massachusetts	9,470	88,200	9.31	11,300	103,000	9.17
Michigan	31,600	173,000	5.48	34,300	197,000	5.74
Minnesota	44,600 r	222,000 r	4.98 r	43,600	203,000	4.64
Mississippi	11,500	90,500	7.88	10,400	78,200	7.49
Missouri	9,310	62,500	6.71	12,300	85,000	6.90
Montana	12,000	90,300	7.50	12,600	95,900	7.64
Nebraska	12,900	84,800	6.59	13,200	89,100	6.76
Nevada	12,300	84,700	6.86	17,600	89,800	5.09
New Hampshire	7,040 r	50,800 r	7.22 r	6,270	48,300	7.70
New Jersey	11,100	97,600	8.83	13,600	113,000	8.28
New Mexico	10,200	83,200	8.19	8,370	71,800	8.58
New York	28,900 r	254,000	8.80 r	28,900	254,000	8.82
North Carolina	7,220	42,900	5.94	8,800	60,100	6.83
North Dakota	29,400 r	208,000 r	7.07	32,600	255,000	7.80
Ohio	29,500	234,000	7.94	29,300	234,000	7.98
Oklahoma	11,800	73,200	6.22	12,000	83,200	6.93
Oregon	10,400	89,500	8.63	11,500	97,700	8.50
Pennsylvania	11,600	103,000	8.87	11,200	101,000	9.04
Rhode Island	2,500	28,400	11.34	2,280	28,100	12.31
South Carolina	6,380	36,300	5.68	6,430	37,700	5.86
South Dakota	13,100	63,100	4.81	17,400	80,500	4.62
Tennessee	6,110	47,500	7.77	5,420	43,200	7.97
Texas	80,800	584,000	7.23	78,300	606,000	7.75
Utah	23,900 r	173,000 r	7.23 r	24,500	175,000	7.14
Vermont	4,700	38,400	8.17	4,820	37,700	7.82
Virginia	6,470	73,700	11.39	6,960	77,800	11.17
Washington	28,100	214,000	7.64	29,500	224,000	7.60
West Virginia	578	4,890	8.45	487	4,130	8.47
Wisconsin	27,500	138,000	5.00	29,700	157,000	5.30
Wyoming	11,800	100,000	8.51	12,600	95,100	7.53
Total or average	816,000 r	6,250,000 r	7.66 r	850,000	6,470,000	7.62

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

TABLE 4
CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN THE UNITED STATES IN 2013, BY MAJOR USE[1]

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregates (including concrete sand)	125,000	$1,090,000	$8.71
Plaster and gunite sands	2,420	26,000	10.74
Concrete products (blocks, bricks, pipe, decorative, etc.)	1,590	14,700	9.26
Asphaltic concrete aggregates and other bituminous mixtures	31,900	282,000	8.84
Road base and coverings	70,700	475,000	6.73
Road stabilization, cement	1,130	7,690	6.82
Road stabilization, lime	854	7,410	8.68
Fill	37,600	199,000	5.29
Snow and ice control	3,370	24,800	7.34
Railroad ballast	234	3,530	15.08
Roofing granules	156	2,130	13.67
Filtration	809	7,830	9.67
Golf course maintenance sand	175	2,160	12.31
Other miscellaneous uses	9,870	99,500	10.08
Unspecified:[2]			
Actual	172,000	1,320,000	7.65
Estimated	392,000	2,920,000	7.45
Total or average	850,000	6,470,000	7.62

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

TABLE 5
CONSTRUCTION SAND AND GRAVEL SOLD OR USED BY PRODUCERS IN THE UNITED STATES IN 2013, 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	3,120	31,100	151	1,820	112	918	1,380	12,100	2,540	21,800
Middle Atlantic	6,790	64,000	147	1,680	123	1,430	2,700	22,100	3,550	26,800
Midwest:										
East North Central	17,100	109,000	105	824	435	3,240	6,200	50,500	8,720	56,100
West North Central	13,700	85,600	234	1,430	222	2,340	5,870	34,200	23,500	130,000
South:										
South Atlantic	11,900	117,000	518	3,860	153	1,230	996	8,760	286	2,690
East South Central	11,000	69,800	44	722	46	392	1,440	10,300	1,740	15,100
West South Central	24,300	217,000	268	3,310	15	185	940	8,840	2,190	18,900
West:										
Mountain	14,100	135,000	249	3,260	245	2,160	4,110	40,700	19,200	128,000
Pacific	22,700	258,000	705	9,090	239	2,830	8,250	94,400	10,900	90,700
Total	125,000	1,090,000	2,420	26,000	1,590	14,700	31,900	282,000	72,700	491,000

	Fill		Snow and ice control		Railroad ballast		Other uses[3]		Total	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Northeast:										
New England	1,830	9,400	565	4,730	14	108	27,200	235,000	36,900	317,000
Middle Atlantic	2,780	15,600	1,160	8,100	13	114	36,300	328,000	53,600	468,000
Midwest:										
East North Central	7,510	38,000	1,000	6,030	34	367	85,700	567,000	127,000	832,000
West North Central	5,300	21,600	212	1,570	49	1,020	92,400	573,000	141,000	851,000
South:										
South Atlantic	3,520	16,600	9	103	1	7	33,200	278,000	50,600	428,000
East South Central	851	4,080	1	13	--	--	17,300	119,000	32,400	220,000
West South Central	4,070	16,100	4	28	18	527	82,800	664,000	115,000	929,000
West:										
Mountain	5,790	27,600	203	2,870	86	1090	112,000	807,000	156,000	1,150,000
Pacific	5,940	49,700	222	1,330	19	289	88,600	776,000	138,000	1,280,000
Total	37,600	199,000	3,370	24,800	234	3,530	575,000	4,350,000	850,000	6,470,000

-- 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).

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

TABLE 6A
CONSTRUCTION SAND AND GRAVEL PRODUCTION IN THE UNITED STATES IN 2013, BY SIZE OF OPERATION[1]

Size range (metric tons)	Number of operations	Percent of total	Quantity (thousand metric tons)	Percent of total
Less than 25,000	1,972	31	17,900	2
25,000 to 49,999	904	14	29,900	3
50,000 to 99,999	1,149	18	75,600	9
100,000 to 199,999	1,003	15	130,000	15
200,000 to 299,999	472	8	105,000	12
300,000 to 399,999	281	4	87,700	10
400,000 to 499,999	171	2	69,100	8
500,000 to 599,999	101	1	50,100	6
600,000 to 699,999	85	1	49,700	5
700,000 to 799,999	50	0.8	33,600	4
800,000 to 899,999	23	0.4	17,600	3
900,000 to 999,999	39	0.4	33,400	3
1,000,000 to 1,499,999	54	2	59,800	8
1,500,000 to 1,999,999	20	0.5	31,100	3
2,000,000 to 2,499,999	10	0.4	20,000	2
2,500,000 and more	12	1	39,300	7
Total	6,346	100	850,000	100

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

TABLE 6B

CONSTRUCTION SAND AND GRAVEL PRODUCTION IN THE UNITED STATES IN 2013, BY REGION AND SIZE OF OPERATION[1]

Size range (metric tons)	Northeast				Midwest			
	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	414	39.4	3,810	4.2	724	30.4	6,690	2.5
25,000 to 49,999	183	17.4	6,160	6.8	360	15.1	12,000	4.5
50,000 to 99,999	176	16.7	11,700	13	485	20.3	32,000	11.9
100,000 to 199,999	136	12.9	17,700	19.6	418	17.5	53,400	19.9
200,000 to 299,999	74	7	16,500	18.2	146	6.1	32,200	12
300,000 to 399,999	31	3	9,690	10.7	94	4	29,500	11
400,000 to 499,999	13	1.2	5,280	5.8	56	2.3	22,700	8.4
500,000 to 599,999	2	0.2	1,030	1.1	28	1.2	13,900	5.2
600,000 to 699,999	5	0.5	2,820	3.1	21	0.9	12,400	4.6
700,000 to 799,999	7	0.7	4,760	5.3	18	0.8	12,100	4.5
800,000 to 899,999	3	0.3	2,270	2.5	5	0.2	3,810	1.4
900,000 to 999,999	2	0.2	1,740	1.9	8	0.3	6,760	2.5
1,000,000 or more	5	0.5	6,990	7.7	22	0.9	30,800	11.5
Total	1,051	100	90,500	100	2,385	100	268,000	100

Size range (metric tons)	South				West			
	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	210	21.3	1,970	1	624	32.4	5,460	1.8
25,000 to 49,999	95	9.6	3,130	1.6	265	13.8	8,600	2.9
50,000 to 99,999	161	16.3	10,600	5.3	326	16.9	21,400	7.2
100,000 to 199,999	180	18.3	23,900	12.1	269	14	34,900	11.8
200,000 to 299,999	103	10.5	23,200	11.7	148	7.7	33,100	11.3
300,000 to 399,999	74	7.5	22,800	11.5	82	4.3	25,700	8.6
400,000 to 499,999	47	4.8	19,000	9.6	55	2.9	22,200	7.6
500,000 to 599,999	26	2.6	13,000	6.6	45	2.3	22,200	7.5
600,000 to 699,999	27	2.7	15,800	8	32	1.7	18,700	6.1
700,000 to 799,999	14	1.4	9,350	4.7	11	0.6	7,400	2.7
800,000 to 899,999	7	0.7	5,370	2.7	8	0.4	6,190	2.4
900,000 to 999,999	14	1.4	12,100	6.1	15	0.8	12,800	4.1
1,000,000 or more	27	2.7	37,700	18.9	45	2.4	74,700	26.0
Total	985	100	198,000	100	1,925	100	293,000	100

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

TABLE 7
CONSTRUCTION SAND AND GRAVEL SOLD OR USED BY PRODUCERS IN THE UNITED STATES IN 2013, BY GEOGRAPHIC DIVISION AND METHOD OF TRANSPORTATION[1]

(Thousand metric tons)

Region/division	Truck	Rail	Water	Other	Not transported	Not specified	Total
Northeast:							
New England	8,060	--	--	59	1,390	27,300	36,900
Middle Atlantic	13,600	79	806	48	2,760	36,300	53,600
Midwest:							
East North Central	30,500	131	2,470	186	4,510	88,900	127,000
West North Central	37,100	56	915	75	5,690	97,700	141,000
South:							
South Atlantic	16,200	68	--	14	1,940	32,400	50,600
East South Central	9,130	--	3,190	53	784	19,300	32,400
West South Central	24,800	647	--	19	5,710	83,500	115,000
West:							
Mountain	38,500	411	--	216	5,580	111,000	156,000
Pacific	39,000	--	2,400	1,300	7,910	87,100	138,000
Total	217,000	1,400	9,780	1,970	36,300	583,000	850,000

-- Zero.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.

TABLE 8
NUMBER OF CONSTRUCTION SAND AND GRAVEL OPERATIONS AND PROCESSING PLANTS IN THE UNITED STATES IN 2013, BY GEOGRAPHIC DIVISION

	Mining operations on land					
Region/division	Stationary	Portable	Stationary and portable	No plants or unspecified	Dredging operations	Total active operations
Northeast:						
New England	270	180	28	23	19	520
Middle Atlantic	243	182	32	37	37	531
Midwest:						
East North Central	599	297	50	56	101	1,103
West North Central	564	452	53	80	133	1,282
South:						
South Atlantic	168	62	12	37	47	326
East South Central	91	42	9	11	30	183
West South Central	284	86	18	26	62	476
West:						
Mountain	577	517	59	61	20	1,234
Pacific[1]	395	206	45	22	23	691
Total	3,191	2,024	306	353	472	6,346

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

TABLE 9
NUMBER OF CONSTRUCTION SAND AND GRAVEL OPERATIONS AND PROCESSING PLANTS IN THE UNITED STATES IN 2013, BY STATE

State	Mining operations on land				Dredging operations	Total active operations
	Stationary	Portable	Stationary and portable	No plants or unspecified		
Alabama	34	5	4	6	9	58
Alaska[1]	38	22	4	7	3	74
Arizona	76	68	10	3	--	157
Arkansas	32	12	2	1	1	48
California	214	79	20	4	7	324
Colorado	116	113	12	15	4	260
Connecticut	32	24	6	--	3	65
Delaware	5	1	--	1	3	10
Florida	34	15	--	4	7	60
Georgia	24	4	2	--	9	39
Hawaii	4	10	1	--	--	15
Idaho	65	66	4	8	1	144
Illinois	60	8	3	8	29	108
Indiana	76	32	8	1	8	125
Iowa	46	71	7	9	19	152
Kansas	37	43	3	7	29	119
Kentucky	8	3	2	1	7	21
Louisiana	59	9	1	15	27	111
Maine	76	61	7	14	3	161
Maryland	22	2	4	6	2	36
Massachusetts	55	24	3	2	12	96
Michigan	163	109	15	17	19	323
Minnesota	191	140	29	32	13	405
Mississippi	35	22	--	3	7	67
Missouri	44	10	2	--	25	81
Montana	83	72	8	11	--	174
Nebraska	60	35	2	5	43	145
Nevada	49	29	4	6	1	89
New Hampshire	55	20	6	2	--	83
New Jersey	33	6	3	6	10	58
New Mexico	47	40	9	4	5	105
New York	154	151	24	24	24	377
North Carolina	43	13	3	13	12	84
North Dakota	119	79	4	11	--	213
Ohio	109	49	9	14	33	214
Oklahoma	33	13	5	3	21	75
Oregon	35	45	5	5	--	90
Pennsylvania	56	25	5	7	3	96
Rhode Island	6	7	4	--	1	18
South Carolina	17	13	2	4	7	43
South Dakota	67	74	6	16	4	167
Tennessee	14	12	3	1	7	37
Texas	160	52	10	7	13	242
Utah	78	62	10	--	7	157
Vermont	46	44	2	5	--	97
Virginia	22	13	1	9	5	50
Washington	104	50	15	6	13	188
West Virginia	1	1	--	--	2	4
Wisconsin	191	99	15	16	12	333
Wyoming	63	67	2	14	2	148
Total	3,191	2,024	306	353	472	6,346

-- Zero.

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

TABLE 10
RECYCLED ASPHALT CONCRETE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY STATE[1]

State	2012[2]			2013		
	Quantity (thousand metric tons)	Value (thousands)	Unit value	Quantity (thousand metric tons)	Value (thousands)	Unit value
Alabama	296	$5,630	$19.02	381	$7,480	$19.63
Alaska	69	1,050	15.19	148	2,070	13.97
Arizona	126	1,410	11.18	241	2,640	10.95
Arkansas	25	260	10.40	30	305	10.17
California	1,880	15,500	8.22	2,990	25,000	8.36
Colorado	381	2,510	6.60	500	3,220	6.44
Connecticut	549	3,710	6.76	580	3,960	6.83
Delaware	91	605	6.65	91	605	6.65
Florida	211	2,360	11.18	327	11,400	34.72
Georgia	241	4,110	17.05	295	2,870	9.71
Hawaii	--	--	--	--	--	--
Idaho	44	305	6.93	210	1,630	7.74
Illinois	1,570	10,100	6.45	1,720	11,300	6.60
Indiana	164	2,250	13.71	157	1,410	8.97
Iowa	90	971	10.79	249	1,730	6.95
Kansas	604	2,260	3.74	591	1,870	3.16
Kentucky	367	1,330	3.63	375	1,280	3.42
Louisiana	129	1,250	9.70	134	1,320	9.84
Maine	192	2,620	13.64	211	2,740	12.98
Maryland	208	1,800	8.65	195	1,540	7.88
Massachusetts	423	4,200	9.92	434	4,090	9.43
Michigan	976	3,980	4.08	895	4,430	4.94
Minnesota	1,290	10,400	8.10	1,340	10,400	7.74
Mississippi	11	23	2.09	14	66	4.71
Missouri	188	1,430	7.62	175	1,280	7.34
Montana	50	510	10.20	147	1,520	10.33
Nebraska	81	600	7.41	83	640	7.71
Nevada	229	2,130	9.32	150	1,180	7.85
New Hampshire	295	3,280	11.10	302	3,120	10.31
New Jersey	200	1,320	6.59	179	2,420	13.54
New Mexico	240	1,380	5.76	72	560	7.78
New York	715	6,340	8.87	737	6,270	8.51
North Carolina	1,150	8,800	7.65	1,230	10,600	8.60
North Dakota	55	259	4.71	66	736	11.15
Ohio	73	522	7.15	62	474	7.65
Oklahoma	91	1,000	11.00	91	1,010	11.04
Oregon	79	563	7.13	103	695	6.75
Pennsylvania	1,350	9,550	7.07	1,240	9,040	7.26
Rhode Island	31	707	22.81	97	1,370	14.08
South Carolina	313	3,680	11.75	377	3,310	8.79
South Dakota	95	903	9.51	134	1,500	11.19
Tennessee	138	1,780	12.91	154	1,750	11.33
Texas	226	1,950	8.64	275	1,510	5.49
Utah	670	5,370	8.01	505	4,650	9.20
Vermont	99	1,080	10.90	159	2,660	16.72
Virginia	275	2,390	8.70	265	2,750	10.36
Washington	137	975	7.12	160	1,220	7.63
West Virginia	11	34	3.09	8	104	13.00
Wisconsin	502	3,420	6.82	472	3,210	6.79
Wyoming	36	320	8.89	82	358	4.37
Total or average	17,300	139,000	8.05	19,400	167,000	8.60

-- Zero.
[1]Data are rounded to no more than three significant digits, except unit values; may not add to totals shown.
[2]Estimated quantities have been recalculated.

TABLE 11
RECYCLED PORTLAND CEMENT CONCRETE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY STATE[1]

State	2012[2]			2013		
	Quantity (thousand metric tons)	Value (thousands)	Unit value	Quantity (thousand metric tons)	Value (thousands)	Unit value
Alabama	--	--	--	--	--	--
Alaska	24	$216	$9.00	129	$1,560	$12.12
Arizona	69	596	8.64	224	1,830	8.15
Arkansas	1	8	8.00	9	67	7.44
California	2,270	16,900	7.43	3,770	27,600	7.31
Colorado	603	3,980	6.59	683	4,520	6.62
Connecticut	77	642	8.34	95	800	8.42
Delaware	69	313	4.54	69	313	4.54
Florida	493	1,910	3.87	547	2,310	4.23
Georgia	116	906	7.81	149	1,530	10.23
Hawaii	4	51	12.75	2	23	11.50
Idaho	18	141	7.83	53	412	7.77
Illinois	1,580	11,400	7.24	2,430	20,100	8.28
Indiana	131	1,150	8.81	141	1,100	7.77
Iowa	242	1,910	7.89	1,030	5,640	5.49
Kansas	336	2,900	8.62	322	2,770	8.59
Kentucky	--	--	--	--	--	--
Louisiana	35	597	17.06	12	204	17.00
Maine	33	220	6.67	44	344	7.82
Maryland	311	2,970	9.54	347	2,960	8.54
Massachusetts	191	1,270	6.66	206	2,100	10.18
Michigan	997	6,440	6.46	1,050	7,120	6.78
Minnesota	795	5,340	6.71	919	5,510	6.00
Mississippi	62	417	6.73	68	463	6.81
Missouri	28	175	6.25	12	68	5.57
Montana	20	118	5.90	22	353	16.15
Nebraska	105	1,240	11.82	110	1,300	11.85
Nevada	30	178	5.93	138	1,270	9.19
New Hampshire	159	852	5.36	90	641	7.12
New Jersey	385	3,270	8.48	346	2,940	8.51
New Mexico	2	12	6.00	14	120	8.57
New York	155	1,340	8.61	234	1,720	7.36
North Carolina	235	2,660	11.32	331	3,570	10.79
North Dakota	50	320	6.40	37	209	5.65
Ohio	397	3,110	7.83	299	2,370	7.94
Oklahoma	309	2,810	9.11	312	2,880	9.24
Oregon	56	428	7.64	95	870	9.16
Pennsylvania	325	1,640	5.03	345	1,750	5.08
Rhode Island	13	121	9.31	10	83	8.30
South Carolina	185	2,430	13.11	233	2,480	10.62
South Dakota	190	1,930	10.17	109	772	7.08
Tennessee	39	250	6.41	20	157	7.85
Texas	1,440	11,100	7.75	3,850	24,700	6.42
Utah	501	4,660	9.29	380	3,290	8.67
Vermont	9	49	5.44	29	173	5.97
Virginia	611	5,220	8.54	798	7,140	8.95
Washington	289	1,730	5.99	317	2,260	7.13
West Virginia	--	--	--	--	--	--
Wisconsin	636	3,450	5.42	687	3,640	5.29
Wyoming	46	358	7.78	60	288	4.80
Total or average	14,700	110,000	7.48	21,200	154,000	7.29

-- Zero.

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

[2]Estimated quantities have been recalculated.

TABLE 12
U.S. EXPORTS OF CONSTRUCTION SAND AND GRAVEL IN 2013, BY COUNTRY[1]

(Thousand metric tons and thousand dollars)

	Sand		Gravel	
Country or territory	Quantity	Value, f.a.s.[2]	Quantity	Value, f.a.s.[2]
North America:				
Bahamas, The	3	511	1	294
Canada	25	2,110	7	4,060
Mexico	5	2,250	(3)	103
Other	3	1,030	1	684
Total	36	5,900	9	5,140
South America:				
Suriname	1	240	--	--
Venezuela	1	296	(3)	10
Other	1	325	(3)	34
Total	3	861	(3)	44
Europe:				
Ireland	1	151	1	236
United Kingdom	5	1,110	(3)	52
Other	1	403	(3)	433
Total	7	1,670	1	721
Asia:				
Korea, Republic of	1	389	(3)	30
Other	1	379	(3)	101
Total	2	768	(3)	131
Oceania	(3)	115	(3)	22
Middle East	(3)	113	(3)	13
Africa	(3)	187	(3)	42
Grand total	49	9,610	10	6,110

-- Zero.

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

[2]Free alongside ship. 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 ½ unit.

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)

	2012		2013	
Country or territory	Quantity	Value, c.i.f.[2]	Quantity	Value, c.i.f.[2]
Antigua and Barbuda	5	124	2	55
Australia	(3) r	663 r	1	796
Bahamas, The	4	149	4	130
Canada	3,660	40,000	3,800	45,800
China	7	2,500	4	2,220
Colombia	26	81	--	--
France	2	301	1	331
Germany	4	928	5	1,190
Mexico	326	4,910	315	5,080
New Zealand	5	1,860	5	1,440
Norway	43	4,700	32	4,180
Peru	8	1,020	4	1,240
Vietnam	--	--	25	2,330
Other	13 r	1,980 r	22	2,740
Total	4,110	59,200	4,230	67,500

rRevised. -- Zero.

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

[2]Cost, insurance, and freight. 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]Less than ½ unit.

Source: U.S. Census Bureau.