



2016 Minerals Yearbook

STONE, CRUSHED [ADVANCE RELEASE]

STONE, CRUSHED

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A total of 1.36 billion metric tons (Gt) of crushed stone was produced for consumption in the United States in 2016, a slight increase from the total production of 2015 but 24% less than the record high of 1.78 Gt in 2006 (fig.1). In 2016, the total value of crushed stone produced in the United States was \$15.1 billion, an increase of 6.9% compared with that of 2015 (table 1). The average unit value for crushed stone increased by 5.5% compared with the average unit value for 2015. Employment increased slightly to 68,100 employees working at operations identified by the Mine Safety and Health Administration (MSHA) as producing crushed stone.

About 68% of crushed stone production was limestone and dolomite, followed by, in descending order of tonnage, granite, traprock, miscellaneous stone, sandstone and quartzite, marble, volcanic cinder and scoria, calcareous marl, slate, and shell (table 2).

Foreign trade in crushed stone remained relatively small compared with nationwide consumption. In 2016, U.S. exports increased by 24% to 530,000 metric tons (t) compared with 427,000 t in 2015; the value increased by 7% to \$47.1 million, compared with \$44.2 million in 2015 (tables 1, 17). U.S. imports of crushed stone, including calcium carbonate fines, decreased slightly to 19.7 million metric tons (Mt), and the value decreased by 8% to \$184 million compared with 2015 totals (tables 1, 18). Apparent domestic consumption of crushed stone, which is defined as production for consumption (sold or used) plus recycling and imports minus exports, increased slightly compared with that of 2015.

Stone is one of the most accessible natural resources on Earth and one of the fundamental building blocks of society. Stone has been used since the beginning of civilization in a variety of ways that have increased in number and complexity alongside technological progress. Today, in its crushed form, stone is a basic, major, raw material for the construction industry, agriculture, and industries that use complex chemical and metallurgical processes. Despite the relatively low but increasing unit value of its basic products, the crushed stone industry is a major contributor to, and an indicator of, the economic well-being of the Nation. Construction aggregates are the combination of crushed stone and construction sand and gravel. The construction sand and gravel industry is reviewed in a separate chapter, and both mineral commodities are usually included in any review of the national or State aggregates industry.

Production

Domestic production data for crushed stone were derived by the U.S. Geological Survey (USGS) from voluntary surveys of U.S. producers. In 2016, a total of 1,468 companies produced or sold crushed stone from 3,748 operations with 3,711 quarries and 371 sales and (or) distribution sites (table 16). Of the 3,748 active operations, 2,050 operations reported their production or sales

to the USGS, and their total production was 1.01 Gt (74% of the U.S. total). Of the 2,050 reporting operations, 634 operations did not report a breakdown by end use. The total production for these operations was 422 Mt (31% of the U.S. total) and is included in table 9 under “Unspecified, reported” uses.

Production from the nonresponding quarries was estimated by using employment data provided by MSHA. The estimated output of 1,403 nonrespondent operations was 349 Mt (26% of the U.S. total) and is included in table 9 under “Unspecified, estimated” uses.

A total of 371 operations reported that they were active sales yards, and 195 of those operations reported that they sold only recycled aggregates. Virgin crushed stone sales were reported by the other 176 sales yards in 2016, and the total quantity of crushed stone sold from these operations was 43.9 Mt. Information on the number of active operations, including recycling operations, active quarries, dredging operations, types of processing plants, and number of sales yards is provided, by State, in table 16.

Crushed stone was sold in every State and produced in every State except Delaware. The 10 leading producing States were, in descending order of tonnage, Texas, Pennsylvania, Florida, Missouri, Ohio, North Carolina, Virginia, Georgia, Illinois, and Kentucky. The combined production of the 10 leading States increased by 3% compared with that of 2015 and accounted for 53% of the national total (table 4).

Included in the total number of active operations for 2016 were 100 underground mines, which produced 85.2 Mt of crushed stone in 17 States. The five leading States were, in descending order of tonnage, Kentucky, Missouri, Pennsylvania, Illinois, and Iowa. The combined production of the five leading States was 60.2 Mt (71% of the total of U.S. crushed stone produced underground).

A total of 210 crushed stone operations were either idle or presumed idle in 2016 because no production report was received, and no employment information was available to estimate production. Since the 2015 survey, 121 operations have closed. Most of the idle or closed operations were small, temporary quarries, some of which were operated by State or local governments. Operations in U.S. Territories are not included in the above count.

Of the total 1.36 Gt of crushed stone produced for consumption in the United States in 2016, 68% was limestone and dolomite, 15% was granite, 6% was traprock, 5% was miscellaneous stone, and 4% was sandstone and quartzite. The remaining 1% was shared, in descending order of tonnage, by marble, volcanic cinder and scoria, calcareous marl, slate, and shell. These percentages were calculated based on the total amount of crushed stone produced for consumption that was reported and estimated, including individual amounts withheld to avoid disclosing company proprietary data (table 2).

A review of production by operation size at the national level indicated that in 2016, 702 Mt of crushed stone (52% of the total crushed stone) was produced by 384 operations reporting production of more than 1 million metric tons per year; 312 Mt (23%) was produced by 490 operations reporting production between 500,000 and 999,999 metric tons per year (t/yr); and 301 Mt (22%) was produced by 1,311 operations reporting production between 100,000 and 499,999 t/yr (table 5A). In 2016, by geographic region, the South had 1,284 active operations, followed by the Midwest with 1,012, the West with 643, and the Northeast with 583 (table 5B).

The leading producing companies in 2016 were, in descending order of tonnage, Vulcan Materials Co.; Martin Marietta Aggregates; Oldcastle Materials, Inc.; Lehigh Hanson, Inc.; LafargeHolcim Ltd; CEMEX S.A.B. de C.V.; Rogers Group, Inc.; Carmeuse Lime & Stone Inc.; Luck Stone Corp.; and Lhoist North America (table 19). In 2016, the combined production of the top 10 companies increased by 2% to 632 Mt (47% of the national total). The combined production of the top 100 companies was 1.02 Gt (75% of the national total). The combined production of the leading 294 companies was 1.21 Gt of crushed stone, which means that 20% of the companies produced 89% of the total sales in 2016.

Production of crushed stone, by type, is detailed below.

Calcareous Marl.—The output of calcareous marl increased slightly, compared with that of 2015, to 2.8 Mt valued at \$10.7 million (table 2).

Dolomite.—The production of dolomite increased slightly, compared with the total for 2015, to 43.2 Mt valued at \$489 million (table 2). Crushed dolomite production was reported in 26 States. The leading producing States were, in descending order of tonnage, Pennsylvania, New York, and Utah; the total production of these three States was 37% of the total U.S. output (table 6). An additional undetermined amount of dolomite was included in the crushed limestone total, as explained in the limestone portion of the “Production” section.

Granite.—The output of crushed granite increased by 10%, compared with that of 2015, to 208 Mt valued at \$2.9 billion (table 2). Crushed granite production was reported in 32 States. The leading producing States were, in descending order of tonnage, Georgia, North Carolina, Virginia, South Carolina, and California; the total production of these five States was 144 Mt (69% of the U.S. output) (table 7).

Limestone.—The output of crushed limestone (including some dolomite) decreased slightly, compared with that of 2015, to 884 Mt valued at \$9.1 billion (table 2). Limestone production was reported in 45 States, which included small quantities of limestone and dolomite that were produced in the same quarry. Companies in 29 States reported production of 35.9 Mt of limestone and dolomite combined, which was included with the limestone listed in table 2. The limestone totals listed in this chapter, therefore, include an undetermined amount of dolomite in addition to the dolomite reported separately. The leading producing States were, in descending order of tonnage, Texas, Florida, Missouri, Ohio, and Pennsylvania; the total production of these five States was 392 Mt (44% of the total U.S. output) (table 6).

Marble.—The production of crushed marble increased by 3%, compared with the total for 2015, to 6.1 Mt valued at \$88.2 million (table 2). Crushed marble production was reported in 12 States (table 6).

Miscellaneous Stone.—This category includes three types of miscellaneous crushed stone production: (1) crushed stone reported by the company as “other” on the survey form or as a type of stone not listed in table 2, (2) unknown stone types from a company or operation new to the survey, and (3) a known stone type when the amount reported must be withheld to protect company proprietary data. The concealed amount is added to the quantity of miscellaneous stone produced in that State and then published. The first year that an operation is added to the survey, its production is often estimated using MSHA employment data. The type of stone is updated when a response is received from the operation, and the data are revised for the next report.

The reported output of miscellaneous stone decreased by 3%, compared with the total for 2015, to 73.4 Mt valued at \$755 million (table 2). In 2016, the reported amount of miscellaneous stone accounted for 71% of the total output of miscellaneous stone and 66% of its value (table 8). The remaining 39% (29.8 Mt) of the total output consisted of known stone types for which data were withheld.

Sandstone and Quartzite.—The output of crushed sandstone and quartzite increased by 7%, compared with the total for 2015, to 48.4 Mt valued at \$502 million (table 2). The leading producing States were, in descending order of combined tonnage of sandstone and quartzite, Pennsylvania, Texas, Arkansas, South Dakota, and New York. Their combined total production was 28.9 Mt (60% of the U.S. output) (table 7). Crushed sandstone was produced in 30 States, and production was 37.9 Mt, which included 0.7 Mt of sandstone and quartzite produced in the same quarry. Crushed quartzite was produced in 17 States, and production was 10.5 Mt.

Shell.—Shell is derived mainly from fossil reefs or oyster shell banks. The output of crushed shell decreased by 15%, compared with the total for 2015, to 499,000 t valued at \$4.5 million (table 2). Crushed shell production was reported in California and Florida (table 8).

Slate.—The output of crushed slate increased slightly, compared with that of 2015, to 2.1 Mt valued at \$29.7 million (table 2). Crushed slate was produced in 11 States, with North Carolina accounting for 45% of the total U.S. output (table 7).

Traprock.—Production of crushed traprock increased slightly, compared with the total for 2015, to 86.4 Mt valued at \$1.21 billion (table 2). Traprock production was reported in 29 States. The leading producing States were, in descending order of tonnage, Virginia, Oregon, New Jersey, North Carolina, and Washington; these five States produced 43.0 Mt (50% of the U.S. output) (table 7).

Volcanic Cinder and Scoria.—Production of volcanic cinder and scoria decreased by 15%, compared with the total for 2015, to 3.2 Mt valued at \$17.6 million (table 2). Volcanic cinder and scoria production was reported in 11 States, with Wyoming accounting for one-half of the U.S. output (table 8).

Consumption

Crushed stone production reported to the USGS is material either sold to other companies or consumers or used by producers. Stockpiled production is not included in the reported quantities. The “sold or used” tonnage, therefore, represents the amount of production, including some imports, released for domestic consumption or export in a given year. Because some of the crushed stone producers did not report a breakdown by end use, their total production was included in the “Unspecified, reported” use category. The estimated production of nonrespondents was included in the “Unspecified, estimated” use category.

The ultimate use of crushed stone determines the specification for particle size and gradation, shape, rock type, and chemical composition. Crushed stone can be used without any binder for a variety of construction or industrial applications, or it can be mixed with a matrix binding material, such as dark bituminous pitch (asphalt) or portland cement. The most common use of crushed stone for construction purposes is as aggregate without a binder, including road base or road-surfacing material, macadam, riprap, railroad ballast, and filter stone (table 9). The second-ranked use of crushed stone is as bituminous aggregate or concrete aggregate in a variety of forms and applications in residential and nonresidential construction, highway and road construction and repair, airports, dams, sewers, and foundations. Sized crushed stone is used as bituminous aggregate and road base. Broken surfaces adhere to the hot, dark, bituminous asphaltic mixture better than rounded surfaces and provide interlocking surfaces that tend to strengthen the asphaltic concrete. Broken particles pack better and tend to move less under load than rounded particles and, therefore, make a better road base product for highway and road construction. This characteristic is essential because the road base and asphaltic concrete tend to flow when placed under great or long duration stresses. Other uses include limestone for lime and portland cement manufacturing, as agricultural limestone for direct application to soil, as filler and conditioner for fertilizers, in animal mineral feeds, and as poultry grit. Smaller amounts of crushed stone are used for a variety of applications, ranging from metallurgical fluxing of antimony, copper, iron, lead, and zinc, to the manufacture of glass, ceramic pottery, and paper, and as fillers and extenders in asphalt, paint, rubber, and plastics. An increasing amount of finely ground limestone is being used to remove sulfur oxides from stack gases, primarily from coal-burning, electric-generating stations, and for mine dusting to enhance mine safety by reducing the explosion risk of highly combustible coal dust.

A total of 1.36 Gt of crushed stone was produced for consumption in the United States in 2016, a slight increase from the total of 2015. Of the 1.36 Gt of crushed stone produced for consumption, 31% was “Unspecified, reported,” and 26% was “Unspecified, estimated.” Of the remaining production reported by use, 76% was used as construction aggregate, mostly for highway and road construction and maintenance, as well as for a variety of building and other construction; 13% for cement manufacturing; 7% for lime manufacturing; 3% for miscellaneous uses and products, including other chemical and special uses; and 2% for agricultural uses (table 9). In

marketing analysis or use-pattern studies, the quantities included in unspecified uses may be prorated and added to the reported uses by applying the above percentages calculated for the reported quantities.

About 26% of the limestone produced annually is used to manufacture cement and lime. Totals in table 10 do not accurately account for the total amount used because the response rate of companies sending in limestone data by product or use is about 48%; however, the quantity of limestone needed to manufacture the amount of lime and cement that was produced can be estimated.

For high-calcium lime, under ideal conditions, 1.8 t of limestone is needed to produce 1 t of lime. This quantity excludes lime kiln dust, which may increase limestone requirements by 20% to 30% (H.G. van Oss, mineral commodity specialist, National Minerals Information Center, U.S. Geological Survey, written commun., September 12, 2015). The ratio can vary by producer from 2.5 to 4.0 t of limestone per ton of lime produced. For 2016, total lime produced in the United States was 17.7 Mt, which consumed between 44 Mt and 71 Mt of limestone (Corathers, 2018).

For cement, limestone is used to make clinker and as an additive in the finish mill to bulk out portland cement, to make certain types of blended cement, or to make most forms of masonry cement. The actual requirements cannot be easily calculated because portland cement manufacturers can use quite impure limestone. The theoretical requirements for clinker with 65% calcium oxide (CaO), assuming all of it comes from limestone, is 1.16 t of limestone per 650 kilograms of CaO (that is, per ton of clinker). Because of impurities in the limestone, moisture content, and cement kiln dust (commonly recycled), producers typically need about 1.5 t of limestone per ton of clinker. A single ton of clinker makes about 1.1 t of cement. Thus, producers consume about 1.36 t of limestone per ton of cement produced (H.G. van Oss, mineral commodity specialist, National Minerals Information Center, U.S. Geological Survey, written commun., September 12, 2015). In 2016, total cement produced in the United States was about 83 Mt, which consumed approximately 112 Mt of limestone (van Oss, 2018, p. 3).

The value of the total construction put in place in 2016 increased by 7%, compared with that of 2015, to \$1.19 trillion. The value of total private construction increased by 9% to \$899 billion. The value of total public construction was virtually unchanged at \$292 billion (U.S. Census Bureau, 2018).

Recycling

The recycling of many construction materials expanded, and construction aggregates producers increasingly recycled portland cement concrete and asphalt concrete materials recovered from construction projects for reuse as construction aggregate materials, especially for fill and road-base applications. Portland cement concrete was recycled at some quarries and increasingly at sales yards and distribution sites, whereas asphalt concrete was often recycled in place. The USGS surveyed construction aggregate mining companies, construction companies, and demolition companies, which reported the following data. The data represent an unknown percentage of the actual U.S. total of recycled construction aggregates.

Recycled Asphalt Concrete.—Companies reported that asphalt concrete was recycled in every State except Hawaii. The U.S. total was 22.4 Mt of recycled asphalt valued at \$188 million (table 14). The leading States for 2015 were, in descending order of tonnage of recycled asphalt, California, Illinois, Minnesota, Kentucky, and North Carolina. The combined total for these States was 9.1 Mt, which accounted for 41% of the U.S. total.

Recycled Portland Cement Concrete.—Recycling of portland cement concrete, valued at \$207 million, was reported in 47 States (table 15). The leading States for 2015 were, in descending order of tonnage of recycled concrete, California, Texas, Illinois, Minnesota, and Iowa. The combined total for these States was 14.8 Mt, which accounted for 56% of the U.S. total.

Transportation

No means of transportation was reported by the producers for 843 Mt of the 1.36 Gt of crushed stone produced for consumption in 2016. Of the remaining 515 Mt of crushed stone, 74% was reported as transported by truck from the quarry or the processing plant to the first point of sale or use, 6% by waterway, and 5% by rail. About 64.6 Mt of the specified production was reported as not transported and, therefore, is assumed to have been used onsite.

Shipment by truck remains the most widely used method of transportation for crushed stone. The significant increase in the number of sales and distribution yards in the past few years and the increase in the volume of crushed stone sold at these sites affected the markets they serve, especially in areas that lack the geology to support crushed stone mining. Distribution yards, supplied by rail or waterway, are located near metropolitan areas and significantly reduce the distance trucks must travel to pick up and deliver crushed stone. Therefore, the transportation costs are reduced, as is the effect of heavy-vehicle traffic on the infrastructure and the environment. Sales yards serve as distribution sites and, increasingly, as recycling sites.

Prices

Prices in this chapter are the annual average free-on-board plant prices, usually at the first point of sale or captive use, as reported by crushed stone producing companies. This value does not include transportation from the plant or yard to the consumer. The value does include all the costs of mining, processing, in-plant transportation, overhead, and profit. In 2015, 1,047 operations reported the monetary value of their production with an average unit value of \$11.32 per metric ton. In 2016, 993 operations reported the monetary value of their production with an average unit value of \$12.30 per metric ton, which was an increase of 9% compared with that of 2015. Leading U.S. producers reported that prices increased by 7% or greater in 2016, which exceeded the historical average for year-on-year increases. For those operations that reported production only, the unit values for specific end uses were estimated based on reported values for those specific uses in the same State. The reported State average was used in the estimation for operations reporting total production only and for operations that did not respond to the survey.

Additional information regarding prices of crushed stone by type of rock and uses in the United States, and each State, can be found throughout the tables included in this chapter.

Foreign Trade

The widespread distribution of domestic deposits of stone suitable for mining as crushed stone, the large number of existing active operations around the country, and the high cost of transportation limit foreign trade to mostly local transactions across international boundaries. U.S. imports and exports continue to be small, representing slightly more than 1% of domestic consumption.

Information on imports of crushed stone used for this report was derived from two sources. The primary source was import and export data from the U.S. Census Bureau (tables 1, 17–18). Additionally, companies provided import data when reporting the amount sold or used for consumption at each operation, usually a sales yard. The tonnage reported was attributed to the State where it was first sold or used; for example, the crushed stone imported to Florida from Mexico was counted in the total of crushed stone sold or used in Florida (table 4). This accounting practice was the same practice used for large quantities of crushed stone transported from one State to another. For example, crushed stone mined in Kentucky and shipped down the Mississippi River for use in Louisiana was included in the total of crushed stone sold or used in Louisiana.

Exports.—Exports of crushed stone increased by 24% to 530,000 t, compared with the revised total of 427,000 t in 2015, and the value increased by 7% to \$47.1 million (table 1). Total exports of crushed stone to Canada increased while exports to the Bahamas and Mexico decreased. In 2016, exports of crushed limestone for cement manufacturing had an average unit value of \$423 per ton (table 17).

Imports.—Imports of crushed stone decreased slightly to 19.7 Mt, compared with those of 2015, and the value decreased by 8% to \$184 million (table 1). Of the imported crushed stone, 74% was limestone used as construction aggregate, flux stone, and in cement manufacturing (table 18).

Outlook

The crushed stone industry is cyclical, reacting to the levels of activity in public infrastructure projects, commercial and residential construction markets, and other types of construction. The residential construction slowdown in the United States that began in 2006 led to decreased consumption of crushed stone. After 4 years of decline, residential construction appeared to level off in late 2010, and crushed stone production remained almost flat until increasing by 5% in 2014 and 7% in 2015 to return to almost flat production in 2016 (fig. 1).

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TABLE 1
 SALIENT CRUSHED STONE STATISTICS¹

(Thousand metric tons and thousand dollars)

	2012	2013	2014	2015	2016
<u>Sold or used by producers:²</u>					
Quantity	1,170,000 ^r	1,190,000 ^r	1,250,000	1,340,000 ^r	1,360,000
Value	11,400,000	11,800,000 ^r	12,700,000 ^r	14,200,000 ^r	15,100,000
<u>Recycled:</u>					
Quantity	31,100	40,000 ^r	40,500 ^r	48,100 ^r	48,900
Value	241,000	309,000 ^r	309,000 ^r	380,000 ^r	394,000
<u>Exports:</u>					
Quantity	938 ^r	395 ^r	455 ^r	427 ^r	530
Value	41,700 ^r	51,000 ^r	48,600 ^r	44,200 ^r	47,100
<u>Imports for consumption:³</u>					
Quantity	13,400 ^r	15,600 ^r	17,700 ^r	19,900 ^r	19,700
Value	155,000 ^r	162,000 ^r	194,000 ^r	200,000 ^r	184,000
Employment ⁴	66,200	65,900	65,600	67,100	68,100

^rRevised.

¹Table includes data available through July 13, 2018. Data are rounded to no more than three significant digits.

²Does not include American Samoa, Guam, Puerto Rico, and the U.S. Virgin Islands.

³Excludes precipitated calcium carbonate.

⁴Average number of employees including office staff. Source: Mine Safety and Health Administration.

TABLE 2
CRUSHED STONE SOLD OR USED IN THE UNITED STATES, BY TYPE^{1,2}

Type	2015 ³				2016			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone ⁴	1,987	887,000	\$8,770,000	\$9.89	2,009	884,000	\$9,140,000	\$10.34
Dolomite	106	42,900	474,000	11.05	119	43,200	489,000	11.32
Marble	23	5,940	88,200	14.85	22	6,090	88,200	14.47
Calcareous marl	5	2,760	10,800	3.90	4	2,790	10,700	3.82
Shell	7	586	5,350	9.13	8	499	4,540	9.09
Granite	400	189,000	2,480,000	13.07	405	208,000	2,880,000	13.83
Traprock	289	84,900	1,150,000	13.51	294	86,400	1,210,000	13.99
Sandstone and quartzite ⁵	208	45,300	459,000	10.13	223	48,400	502,000	10.37
Slate	23	2,090	27,600	13.20	24	2,130	29,700	13.94
Volcanic cinder and scoria	41	3,800	18,800	4.95	35	3,240	17,600	5.43
Miscellaneous stone	531	75,600	675,000	8.92	568	73,400	755,000	10.28
Total or average	XX	1,340,000	14,200,000	10.56	XX	1,360,000	15,100,000	11.14

XX Not applicable.

¹Table includes data available through July 13, 2018. Data are rounded to no more than three significant digits, except unit values; may not add to totals shown.

²Does not include American Samoa, Guam, Puerto Rico, and the U.S. Virgin Islands.

³Estimated quantities have been recalculated.

⁴Includes limestone-dolomite reported with no distinction between the two kinds of stone.

⁵Includes sandstone-quartzite reported with no distinction between the two kinds of stone.

TABLE 3
CRUSHED STONE SOLD OR USED IN THE UNITED STATES, BY GEOGRAPHIC DIVISION^{1,2}

(Thousand metric tons and thousand dollars)

Region and division	2015 ³		2016	
	Quantity	Value	Quantity	Value
Northeast:				
New England	38,500	461,000	39,400	484,000
Middle Atlantic	146,000	1,740,000	142,000	1,770,000
Total	184,000	2,200,000	182,000	2,250,000
Midwest:				
East North Central	213,000	1,850,000	209,000	1,910,000
West North Central	147,000	1,320,000	148,000	1,360,000
Total	360,000	3,170,000	356,000	3,280,000
South:				
South Atlantic	280,000	3,750,000	304,000	4,310,000
East South Central	131,000	1,410,000	131,000	1,480,000
West South Central	232,000	2,290,000	236,000	2,400,000
Total	644,000	7,440,000	672,000	8,200,000
West:				
Mountain	72,000	521,000	64,500	526,000
Pacific	80,000	818,000	84,000	881,000
Total	152,000	1,340,000	148,000	1,410,000
Grand total	1,340,000	14,200,000	1,360,000	15,100,000

¹Table includes data available through July 13, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²Does not include American Samoa, Guam, Puerto Rico, and the U.S. Virgin Islands.

³Estimated quantities have been recalculated.

TABLE 4
CRUSHED STONE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY STATE AND TERRITORY¹

State	2015 ²			2016		
	Quantity (thousand metric tons)	Value (thousands)	Unit value	Quantity (thousand metric tons)	Value (thousands)	Unit value
Alabama	34,900	\$363,000	\$10.38	36,400	\$405,000	\$11.14
Alaska	1,040	12,100	11.64	749	15,300	20.40
Arizona	10,200	94,300	9.25	10,500	102,000	9.68
Arkansas	27,800	236,000	8.50	29,800	263,000	8.82
California	41,100	360,000	8.77	41,600	370,000	8.89
Colorado	13,100	121,000	9.29	13,800	133,000	9.58
Connecticut	9,360	142,000	15.17	9,900	155,000	15.63
Delaware ³	W	W	W	W	W	W
Florida	67,400	802,000	11.90	73,000	929,000	12.72
Georgia	48,200	643,000	13.32	53,900	782,000	14.50
Hawaii	5,150	101,000	19.66	5,200	110,000	21.26
Idaho	5,200	34,800	6.69	4,660	32,600	6.98
Illinois	54,600	571,000	10.46	52,200	560,000	10.73
Indiana	49,500	384,000	7.76	47,100	390,000	8.28
Iowa	36,000	380,000	10.56	37,700	404,000	10.72
Kansas	17,700	162,000	9.18	17,300	158,000	9.13
Kentucky	54,000	503,000	9.32	49,100	466,000	9.48
Louisiana ³	W	W	W	W	W	W
Maine	4,240	33,200	7.85	4,200	33,500	7.99
Maryland	22,700	246,000	10.84	22,100	258,000	11.66
Massachusetts	12,100	159,000	13.17	12,600	167,000	13.22
Michigan	27,700	199,000	7.18	27,700	199,000	7.17
Minnesota	7,780	97,800	12.56	7,490	94,200	12.58
Mississippi ³	1,900	55,200	29.05	2,170	64,100	29.50
Missouri	70,900	532,000	7.51	69,900	550,000	7.87
Montana	2,820	28,200	10.00	2,800	25,700	9.20
Nebraska	7,680	95,300	12.40	7,670	98,300	12.82
Nevada	9,010	83,900	9.31	9,960	84,800	8.51
New Hampshire	5,550	51,500	9.28	5,660	55,300	9.78
New Jersey	17,800	161,000	9.04	16,600	136,000	8.19
New Mexico	5,120	45,700	8.91	4,760	43,800	9.21
New York	40,600	482,000	11.88	38,600	473,000	12.25
North Carolina	49,700	782,000	15.74	57,800	965,000	16.69
North Dakota	788	6,650	8.45	728	6,840	9.40
Ohio	58,400	523,000	8.97	59,600	585,000	9.82
Oklahoma	38,400	340,000	8.85	36,800	334,000	9.07
Oregon	18,300	132,000	7.20	20,700	151,000	7.29
Pennsylvania	87,500	1,100,000	12.55	87,300	1,160,000	13.26
Rhode Island	2,360	25,300	10.70	2,280	24,500	10.76
South Carolina	23,900	275,000	11.51	28,200	341,000	12.06
South Dakota	6,580	47,600	7.24	6,850	51,200	7.47
Tennessee	40,300	486,000	12.08	43,300	549,000	12.66
Texas	163,000	1,630,000	9.99	166,000	1,720,000	10.37
Utah	8,200	59,500	7.26	7,950	58,900	7.40
Vermont	4,890	49,700	10.17	4,800	49,500	10.32
Virginia	52,300	817,000	15.62	54,400	868,000	15.95
Washington	14,400	212,000	14.70	15,800	234,000	14.81
West Virginia	15,000	166,000	11.03	14,300	160,000	11.19
Wisconsin	22,700	171,000	7.53	22,300	181,000	8.11
Wyoming	18,400	52,800	2.88	9,950	46,000	4.62
Other	4,300	99,700	23.19	4,040	92,900	23.01
U.S. total or average	1,340,000	14,200,000	10.56	1,360,000	15,100,000	11.14
Territory						
American Samoa ⁴	(5)	(5)	(5)	(5)	(5)	(5)
Guam	(5)	(5)	(5)	(5)	(5)	(5)
Puerto Rico	5,210	47,400	9.10	4,470	42,400	9.48
Virgin Islands	(5)	(5)	(5)	(5)	(5)	(5)
Grand total or average	1,350,000	14,200,000	10.56	1,360,000	15,200,000	11.14

See footnotes at end of table.

TABLE 4—Continued
CRUSHED STONE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY STATE AND TERRITORY¹

W Withheld to avoid disclosing company proprietary data; included with “Other.”

¹Table includes data available through July 13, 2018. Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

²Estimated quantities have been recalculated.

³A significant amount of sold or used material was shipped in from other States.

⁴Includes Tutuila Island and dependencies.

⁵Withheld to avoid disclosing company proprietary data; included in “Grand total or average.”

TABLE 5A
CRUSHED STONE SOLD OR USED IN THE UNITED STATES, BY SIZE OF OPERATION^{1,2}

Size range (metric tons)	2015 ³				2016			
	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	555	16.1	5,010	0.4	636	18.1	4,770	0.4
25,000 to 49,999	287	8.4	9,580	0.7	288	8.2	9,790	0.7
50,000 to 99,999	414	12.0	27,800	2.1	413	11.7	27,700	2.0
100,000 to 199,999	525	15.3	68,600	5.1	519	14.7	68,200	5.0
200,000 to 299,999	341	9.9	76,600	5.7	342	9.7	77,000	5.7
300,000 to 399,999	256	7.4	80,200	6.0	295	8.4	93,300	6.9
400,000 to 499,999	189	5.5	76,900	5.7	155	4.4	62,900	4.6
500,000 to 599,999	155	4.5	76,900	5.7	157	4.5	78,200	5.8
600,000 to 699,999	133	3.9	78,000	5.8	108	3.1	64,100	4.7
700,000 to 799,999	86	2.5	58,600	4.4	93	2.6	63,000	4.6
800,000 to 899,999	71	2.1	54,800	4.1	74	2.1	57,000	4.2
900,000 to 999,999	58	1.7	50,300	3.8	58	1.6	49,900	3.7
1,000,000 to 1,499,999	169	4.9	184,000	13.7	169	4.8	184,000	13.5
1,500,000 to 1,999,999	88	2.6	138,000	10.3	104	3.0	161,000	11.9
2,000,000 to 2,499,999	34	1.0	68,200	5.1	33	0.9	66,200	4.9
2,500,000 to 4,999,999	58	1.7	172,000	12.9	64	1.8	196,000	14.4
5,000,000 and more	18	0.5	115,000	8.6	14	0.4	95,500	7.0
Total	3,440	100	1,340,000	100	3,520	100	1,360,000	100

¹Table includes data available through July 13, 2018. Data are rounded to no more than three significant digits except “Number of operations”; may not add to totals shown.

²Does not include recycling plants.

³Estimated quantities have been recalculated.

TABLE 5B
CRUSHED STONE SOLD OR USED IN THE UNITED STATES IN 2016, BY REGION AND SIZE OF OPERATION^{1,2}

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	116	19.9	816	0.4	168	16.6	1,320	0.4
25,000 to 49,999	46	7.9	1,570	0.9	85	8.4	2,980	0.8
50,000 to 99,999	65	11.1	4,350	2.4	126	12.5	8,680	2.4
100,000 to 199,999	85	14.6	11,000	6.0	178	17.6	23,800	6.7
200,000 to 299,999	53	9.1	12,100	6.7	105	10.4	23,600	6.6
300,000 to 399,999	55	9.4	17,400	9.5	86	8.5	27,000	7.6
400,000 to 499,999	32	5.5	13,300	7.3	38	3.8	15,300	4.3
500,000 to 599,999	30	5.1	15,000	8.3	44	4.3	21,800	6.1
600,000 to 699,999	14	2.4	8,320	4.6	27	2.7	16,000	4.5
700,000 to 799,999	19	3.3	12,900	7.1	21	2.1	14,100	4.0
800,000 to 899,999	11	1.9	8,520	4.7	23	2.3	17,700	5.0
900,000 to 999,999	12	2.1	10,300	5.7	19	1.9	16,400	4.6
1,000,000 to 1,499,999	23	3.9	24,800	13.6	36	3.6	38,500	10.8
1,500,000 to 1,999,999	13	2.2	20,400	11.2	28	2.8	43,300	12.1
2,000,000 to 2,499,999	5	0.9	10,000	5.5	6	0.6	12,500	3.5
2,500,000 and more	4	0.7	11,100	6.1	22	2.2	73,400	20.6
Total	583	100	182,000	100	1,012	100	356,000	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	175	13.6	1,340	0.2	177	27.5	1,290	0.9
25,000 to 49,999	84	6.5	2,770	0.4	73	11.4	2,480	1.7
50,000 to 99,999	109	8.5	7,380	1.1	113	17.6	7,300	4.9
100,000 to 199,999	157	12.2	21,000	3.1	99	15.4	12,500	8.4
200,000 to 299,999	138	10.7	31,400	4.7	46	7.2	9,920	6.7
300,000 to 399,999	120	9.3	38,200	5.7	34	5.3	10,700	7.2
400,000 to 499,999	71	5.5	28,700	4.3	14	2.2	5,610	3.8
500,000 to 599,999	66	5.1	32,600	4.9	17	2.6	8,660	5.8
600,000 to 699,999	52	4.0	31,000	4.6	15	2.3	8,900	6.0
700,000 to 799,999	44	3.4	29,700	4.4	9	1.4	6,310	4.2
800,000 to 899,999	35	2.7	27,000	4.0	5	0.8	3,810	2.6
900,000 to 999,999	23	1.8	19,800	3.0	4	0.6	3,440	2.3
1,000,000 to 1,499,999	96	7.5	105,000	15.7	14	2.2	15,000	10.1
1,500,000 to 1,999,999	54	4.2	84,000	12.5	9	1.4	13,600	9.2
2,000,000 to 2,499,999	16	1.2	31,800	4.7	6	0.9	11,800	7.9
2,500,000 and more	44	3.4	180,000	26.7	8	1.2	27,200	18.3
Total	1,284	100	672,000	100	643	100	148,000	100

¹Table includes data available through July 13, 2018. Data are rounded to no more than three significant digits except "Number of operations"; may not add to totals shown.

²Does not include recycling plants.

TABLE 6
LIMESTONE, DOLOMITE, CALCAREOUS MARL, AND MARBLE SOLD OR USED BY PRODUCERS IN THE UNITED STATES
IN 2016, BY STATE¹

(Thousand metric tons and thousand dollars)

State	Limestone		Dolomite		Calcareous marl		Marble	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Alabama	30,400 ²	345,000	788	9,490	--	--	1,540	4,230
Alaska	--	--	--	--	--	--	--	--
Arizona	3,120 ²	29,200	--	--	--	--	--	--
Arkansas	14,000	107,000	694	8,480	--	--	--	--
California	15,700	86,000	61	815	--	--	(3)	(3)
Colorado	908 ²	14,300	(4)	(4)	--	--	--	--
Connecticut	883 ²	14,100	484	8,860	--	--	237	3,770
Delaware	(3)	(3)	--	--	--	--	--	--
Florida	72,300 ²	922,000	(4)	(4)	--	--	--	--
Georgia	4,440	65,500	--	--	--	--	2,200	33,900
Hawaii	--	--	--	--	--	--	--	--
Idaho	145	4,540	--	--	--	--	--	--
Illinois	51,900 ²	558,000	(4)	(4)	--	--	--	--
Indiana	46,800 ²	388,000	(4)	(4)	--	--	--	--
Iowa	37,400 ²	401,000	252	2,410	--	--	--	--
Kansas	16,300 ²	149,000	--	--	--	--	--	--
Kentucky	49,100 ²	465,000	--	--	--	--	--	--
Louisiana	(3)	(3)	--	--	--	--	--	--
Maine	1,460	9,280	--	--	--	--	--	--
Maryland	12,300 ²	125,000	--	--	--	--	132	1,510
Massachusetts	985 ²	17,800	850	11,900	--	--	--	--
Michigan	27,400 ²	197,000	(4)	(4)	(3)	(3)	--	--
Minnesota	2,000 ²	22,000	1,400	16,600	--	--	--	--
Mississippi	2,110	62,100	--	--	--	--	--	--
Missouri	63,200 ²	465,000	2,210	18,000	--	--	--	--
Montana	2,000	17,600	--	--	--	--	--	--
Nebraska	7,570 ²	97,200	--	--	--	--	--	--
Nevada	3,850 ²	28,300	(4)	(4)	--	--	--	--
New Hampshire	--	--	--	--	--	--	--	--
New Jersey	534	4,860	--	--	--	--	--	--
New Mexico	2,330	19,800	--	--	--	--	--	--
New York	24,100 ²	279,000	5,910	79,200	--	--	13	156
North Carolina	2,820	47,000	394	6,520	--	--	--	--
North Dakota	--	--	--	--	--	--	--	--
Ohio	57,400 ²	564,000	1,800	17,300	--	--	--	--
Oklahoma	30,800 ²	275,000	(4)	(4)	--	--	--	--
Oregon	1,720	8,740	--	--	--	--	--	--
Pennsylvania	52,800 ²	651,000	7,360	82,200	--	--	(3)	(3)
Rhode Island	--	--	--	--	--	--	--	--
South Carolina	5,790	50,800	--	--	(3)	(3)	(3)	(3)
South Dakota	2,520 ²	14,700	(4)	(4)	--	--	--	--
Tennessee	42,600 ²	539,000	(4)	(4)	--	--	--	--
Texas	147,000 ²	1,550,000	--	--	35	281	(3)	(3)
Utah	3,340	23,300	2,510	20,000	--	--	--	--
Vermont	2,220 ²	21,900	(4)	(4)	--	--	--	--
Virginia	20,800 ²	301,000	(4)	(4)	--	--	(3)	(3)
Washington	998 ²	13,800	284	13,400	--	--	(3)	(3)
West Virginia	13,600	150,000	--	--	--	--	--	--
Wisconsin	17,800 ²	128,000	420	2,960	--	--	78	547
Wyoming	3,020 ²	20,000	--	--	--	--	--	--
Total	898,000	9,250,000	25,400	298,000	35	281	4,200	44,100

-- Zero.

¹Table includes data available through July 13, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes limestone-dolomite reported with no distinction between the two kinds of stone.

³Withheld to avoid disclosing company proprietary data; included with "Miscellaneous stone" on table 8.

⁴Withheld to avoid disclosing company proprietary data; included with "Limestone."

TABLE 7
GRANITE, TRAPROCK, SANDSTONE AND QUARTZITE, AND SLATE SOLD OR USED BY PRODUCERS IN THE UNITED STATES
IN 2016, BY STATE¹

(Thousand metric tons and thousand dollars)

State	Granite		Traprock		Sandstone and quartzite ²		Slate	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Alabama	2,380	29,900	--	--	738	9,410	423	5,260
Alaska	119	8,290	(3)	(3)	--	--	--	--
Arizona	4,200	46,500	218	2,140	1,160	13,500	--	--
Arkansas	6,720	71,100	--	--	7,030	65,700	169	374
California	13,600	136,000	6,220	63,400	735	13,300	9	70
Colorado	5,740	53,100	(3)	(3)	(3)	(3)	--	--
Connecticut	812	13,000	6,140	93,700	--	--	--	--
Delaware	--	--	(3)	(3)	--	--	--	--
Florida	--	--	--	--	85	1,010	--	--
Georgia	46,700	673,000	--	--	522	8,130	(3)	(3)
Hawaii	--	--	4,720	93,000	--	--	--	--
Idaho	(3)	(3)	1,080	7,370	(3)	(3)	--	--
Illinois	--	--	--	--	--	--	--	--
Indiana	--	--	--	--	--	--	--	--
Iowa	--	--	--	--	--	--	--	--
Kansas	--	--	--	--	980	9,030	--	--
Kentucky	--	--	--	--	--	--	--	--
Louisiana	--	--	--	--	241	4,480	--	--
Maine	2,300	19,800	39	347	278	2,450	--	--
Maryland	5,070	61,600	(3)	(3)	(3)	(3)	--	--
Massachusetts	(3)	(3)	4,460	56,600	--	--	--	--
Michigan	--	--	(3)	(3)	--	--	--	--
Minnesota	3,260	45,900	5	59	445	6,020	--	--
Mississippi	--	--	--	--	--	--	--	--
Missouri	1,600	35,100	(3)	(3)	(3)	(3)	--	--
Montana	(3)	(3)	509	5,210	(3)	(3)	--	--
Nebraska	--	--	--	--	24	378	--	--
Nevada	103	804	1,230	12,000	1	12	--	--
New Hampshire	3,120	29,900	1,860	19,200	201	1,920	--	--
New Jersey	7,450	61,400	8,580	69,400	--	--	--	--
New Mexico	--	--	--	--	178	1,800	--	--
New York	2,380	30,700	3,050	42,200	1,890	22,900	10	120
North Carolina	42,900	714,000	8,490	142,000	--	--	936	15,600
North Dakota	--	--	--	--	--	--	--	--
Ohio	--	--	44	427	354	3,350	--	--
Oklahoma	3,750	38,400	--	--	442	4,000	--	--
Oregon	(3)	(3)	9,190	73,000	(3)	(3)	(3)	(3)
Pennsylvania	3,010	38,500	5,270	165,000	9,520	109,000	299	4,560
Rhode Island	967	10,400	1,140	12,300	--	--	--	--
South Carolina	19,300	274,000	--	--	--	--	--	--
South Dakota	170	1,420	--	--	3,410	27,500	12	104
Tennessee	--	--	--	--	726	9,630	--	--
Texas	(3)	(3)	(3)	(3)	7,090	47,700	--	--
Utah	--	--	--	--	(3)	(3)	--	--
Vermont	441	4,660	72	791	1,220	12,900	227	2,440
Virginia	21,400	369,000	10,200	164,000	1,020	17,000	3	58
Washington	885	9,140	6,600	80,200	(3)	(3)	--	--
West Virginia	--	--	--	--	743	10,200	--	--
Wisconsin	3,040	34,300	831	14,500	32	225	--	--
Wyoming	2,070	16,400	--	--	(3)	(3)	--	--
Total	203,000	2,830,000	79,900	1,120,000	39,100	402,000	2,090	28,600

-- Zero.

¹Table includes data available through July 13, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes sandstone-quartzite reported with no distinction between the two kinds of stone.

³Withheld to avoid disclosing company proprietary data; included with "Miscellaneous stone" on table 8.

TABLE 8
SHELL, VOLCANIC CINDER AND SCORIA, AND MISCELLANEOUS STONE SOLD OR USED
BY PRODUCERS IN THE UNITED STATES IN 2016, BY STATE¹

(Thousand metric tons and thousand dollars)

State	Shell		Volcanic cinder and scoria		Miscellaneous stone	
	Quantity	Value	Quantity	Value	Quantity	Value
Alabama	--	--	--	--	110	1,620
Alaska	--	--	--	--	630	6,990
Arizona	--	--	396	3,040	1,450	7,650
Arkansas	--	--	--	--	1,130	9,660
California	41	1,080	195	2,130	5,050	66,400
Colorado	--	--	117	1,220	7,080	64,000
Connecticut	--	--	--	--	1,340	21,300
Delaware	--	--	--	--	W	W
Florida	458	3,460	--	--	244	2,650
Georgia	--	--	--	--	29	914
Hawaii	--	--	35	676	443	16,800
Idaho	--	--	42	273	3,390	20,400
Illinois	--	--	--	--	295	2,810
Indiana	--	--	--	--	274	2,150
Iowa	--	--	--	--	70	668
Kansas	--	--	--	--	3	31
Kentucky	--	--	--	--	25	243
Louisiana	--	--	--	--	W	W
Maine	--	--	--	--	120	1,640
Maryland	--	--	--	--	4,560	69,900
Massachusetts	--	--	--	--	6,300	80,300
Michigan	--	--	--	--	335	2,150
Minnesota	--	--	--	--	381	3,670
Mississippi	--	--	--	--	68	2,040
Missouri	--	--	--	--	2,890	32,200
Montana	--	--	--	--	288	2,920
Nebraska	--	--	--	--	71	796
Nevada	--	--	(2)	(2)	4,780	43,600
New Hampshire	--	--	--	--	469	4,320
New Jersey	--	--	--	--	--	--
New Mexico	--	--	(2)	(2)	2,240	22,200
New York	--	--	--	--	1,270	18,200
North Carolina	--	--	--	--	2,350	39,700
North Dakota	--	--	(2)	(2)	728	6,840
Ohio	--	--	--	--	27	195
Oklahoma	--	--	--	--	1,820	16,700
Oregon	--	--	(2)	(2)	9,770	69,200
Pennsylvania	--	--	--	--	9,030	108,000
Rhode Island	--	--	--	--	172	1,840
South Carolina	--	--	--	--	3,170	15,700
South Dakota	--	--	--	--	741	7,510
Tennessee	--	--	--	--	50	709
Texas	--	--	--	--	12,200	122,000
Utah	--	--	--	--	2,110	15,500
Vermont	--	--	--	--	622	6,840
Virginia	--	--	--	--	1,040	17,400
Washington	--	--	55	844	7,000	117,000
West Virginia	--	--	--	--	--	--
Wisconsin	--	--	--	--	34	242
Wyoming	--	--	1,650	2,070	3,220	7,490
Other	--	--	--	--	3,800	88,400
Total	499	4,540	2,490	10,200	103,000	1,150,000

W Withheld to avoid disclosing company proprietary data; included with "Other." -- Zero.

¹Table includes data available through July 13, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²Withheld to avoid disclosing company proprietary data; included with "Miscellaneous stone."

TABLE 9
CRUSHED STONE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY USE¹

Use	2015 ²			2016		
	Quantity (thousand metric tons)	Value (thousands)	Unit value	Quantity (thousand metric tons)	Value (thousands)	Unit value
Construction:						
Coarse aggregate (+1½ inch):						
Macadam	999	\$12,300	\$12.31	991	\$9,230	\$9.31
Riprap and jetty stone	7,870	99,400	12.63	7,240	91,400	12.61
Filter stone	1,920	20,700	10.75	2,120	25,800	12.13
Unspecified coarse aggregate	20,300	247,000	12.17	22,300	275,000	12.31
Coarse aggregate, graded:						
Concrete aggregate, coarse	27,000	317,000	11.73	23,900	298,000	12.47
Bituminous aggregate, coarse	16,600	200,000	12.01	14,300	178,000	12.45
Bituminous surface-treatment aggregate	5,220	70,700	13.53	3,360	48,800	14.53
Railroad ballast	7,080	77,700	10.97	6,520	75,000	11.51
Unspecified graded coarse aggregate	112,000	1,610,000	14.36	119,000	1,880,000	15.83
Fine aggregate (-¾ inch):						
Stone sand, concrete	3,920	48,600	12.39	5,130	76,000	14.83
Stone sand, bituminous mix or seal	7,210	78,100	10.83	6,170	63,000	10.22
Screening, undesignated	9,140	81,900	8.96	6,560	64,400	9.82
Unspecified fine aggregate	37,700	447,000	11.87	39,600	516,000	13.03
Coarse and fine aggregates:						
Graded road base or subbase	56,300	463,000	8.24	48,600	415,000	8.55
Unpaved road surfacing	8,580	83,100	9.69	6,150	61,900	10.06
Terrazzo and exposed aggregate	1,390	16,200	11.65	1,740	32,400	18.65
Crusher run or fill or waste	20,000	170,000	8.50	13,900	126,000	9.06
Roofing granules	1,300	90,800	69.77	1,600	136,000	85.25
Unspecified coarse and fine aggregates	110,000	1,180,000	10.74	111,000	1,240,000	11.20
Unspecified and other construction materials	4,530	51,200	11.31	3,110	40,900	13.14
Agricultural:						
Agricultural limestone	8,490	77,200	9.09	6,990	68,400	9.79
Poultry grit and mineral food	1,180	21,000	17.76	2,240	33,100	14.80
Unspecified and other agricultural uses	1,030	25,100	24.23	643	19,000	29.47
Chemical and metallurgical:						
Cement manufacture	81,000	436,000	5.39	76,300	414,000	5.42
Lime manufacture	38,500	287,000	7.47	39,100	294,000	7.52
Dead-burned dolomite manufacture	544	3,000	5.51	598	3,300	5.51
Flux stone	3,910	29,500	7.54	3,280	25,800	7.85
Chemical stone	W	W	W	W	W	W
Glass manufacture	341	6,010	17.64	227	5,280	23.23
Sulfur oxide removal	8,140	68,100	8.37	6,740	61,200	9.08
Special:						
Mine dusting or acid water treatment	463	9,080	19.59	451	11,200	24.84
Asphalt fillers or extenders	1,110	25,800	23.21	725	12,300	16.95
Whiting or whiting substitute	293	10,200	34.85	85	6,140	72.17
Other fillers or extenders	3,950	57,000	14.44	3,820	82,900	21.72
Other miscellaneous uses and specified uses not listed	3,190	49,700	15.61	2,470	35,200	14.24
Unspecified:³						
Reported	398,000	4,250,000	10.67	422,000	4,810,000	11.39
Estimated	331,000	3,430,000	10.37	349,000	3,590,000	10.28
Total or average	1,340,000	14,200,000	10.56	1,360,000	15,100,000	11.14

W Withheld to avoid disclosing company proprietary data; included in "Other miscellaneous uses and specified uses not listed."

¹Table includes data available through July 13, 2018. Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

²Estimated quantities have been recalculated.

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

TABLE 10
LIMESTONE AND DOLOMITE SOLD OR USED BY PRODUCERS IN THE UNITED STATES IN 2016, BY USE¹

(Thousand metric tons and thousand dollars)

Use	Limestone ²			Dolomite		
	Quantity	Value	Unit value	Quantity	Value	Unit value
Construction:						
Coarse aggregate (+1½ inch):						
Macadam	366	4,350	\$11.89	W	W	W
Riprap and jetty stone	5,370	57,000	10.62	195	2,770	\$14.17
Filter stone	1,720	20,000	11.65	28	278	10.07
Unspecified coarse aggregate	17,700	213,000	12.02	365	4,620	12.66
Coarse aggregate, graded:						
Concrete aggregate, coarse	16,600	194,000	11.66	717	7,680	10.71
Bituminous aggregate, coarse	7,910	97,500	12.34	859	11,400	13.31
Bituminous surface-treatment aggregate	1,850	23,700	12.82	499	6,650	13.32
Railroad ballast	1,190	14,200	11.93	92	944	10.21
Unspecified graded coarse aggregate	77,900	1,200,000	15.40	3,870	47,800	12.35
Fine aggregate (-¾ inch):						
Stone sand, concrete	3,430	52,000	15.13	141	1,870	13
Stone sand, bituminous mix or seal	3,150	31,300	9.92	334	4,210	12.59
Screening, undesignated	4,220	39,100	9.25	231	2,790	12.11
Unspecified fine aggregate	25,300	330,000	13.05	691	7,940	11.50
Coarse and fine aggregates:						
Graded road base or subbase	33,500	273,000	8.15	1,480	12,100	8.20
Unpaved road surfacing	4,540	46,700	10.27	270	2,890	10.69
Terrazzo and exposed aggregate	W	W	W	W	W	W
Crusher run or fill or waste	9,130	72,100	7.89	1,160	12,100	10.37
Roofing granules	W	W	W	--	--	--
Unspecified coarse and fine aggregates	76,400	850,000	11.14	3,130	29,600	9.45
Unspecified and other construction materials	1,650	20,400	12.36	282	2,520	8.92
Agricultural:						
Agricultural limestone	6,500	62,900	9.68	487	5,510	11.32
Poultry grit and mineral food	2,100	29,800	14.19	--	--	--
Unspecified and other agricultural uses	64	5,440	84.85	44	6,910	156.38
Chemical and metallurgical:						
Cement manufacture	70,900	389,000	5.49	--	--	--
Lime manufacture	38,800	292,000	7.52	378	2,770	7.33
Dead-burned dolomite manufacture	--	--	--	598	3,300	5.51
Flux stone	1,980	16,400	8.28	1,210	8,540	7.07
Chemical stone	W	W	W	--	--	--
Glass manufacture	227	5,280	23.23	--	--	--
Sulfur oxide removal	6,740	61,200	9.08	--	--	--
Special:						
Mine dusting or acid water treatment	441	10,900	24.61	--	--	--
Asphalt fillers or extenders	696	10,200	14.66	--	--	--
Whiting or whiting substitute	35	641	18.22	--	--	--
Other fillers or extenders	3,020	60,900	20.21	472	8,920	18.88
Other miscellaneous uses and specified uses not listed	1,380	10,400	7.52	9	115	12.54
Unspecified:³						
Reported	249,000	2,660,000	10.67	20,600	235,000	11.40
Estimated	210,000	1,990,000	9.48	5,020	59,600	11.87
Total or average	884,000	9,140,000	10.34	43,200	489,000	11.32

W Withheld to avoid disclosing company proprietary data; included in "Total or average." -- Zero.

¹Table includes data available through July 13, 2018. Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

²Includes a minor amount of limestone-dolomite reported with no distinction between the two types of stone.

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

TABLE 11
LIMESTONE AND DOLOMITE SOLD OR USED BY PRODUCERS IN 2016, BY STATE AND USE¹

(Thousand metric tons and thousand dollars)

State	Concrete aggregate		Bituminous aggregate		Roadstone and coverings		Riprap and railroad ballast		Other construction uses	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Alabama	1,160	12,900	4,960	66,600	654	10,400	78	1,210	5,240	64,200
Alaska	--	--	--	--	--	--	--	--	--	--
Arizona	--	--	--	--	--	--	--	--	--	--
Arkansas	31	318	193	2,590	225	1,770	W	W	1,400	11,400
California	--	--	--	--	10	151	W	W	W	W
Colorado	--	--	--	--	--	--	--	--	--	--
Connecticut	16	204	--	--	--	--	4	76	--	--
Delaware	--	--	--	--	--	--	--	--	--	--
Florida	12,300	199,000	12,800	262,000	3,830	34,200	142	2,210	12,400	88,900
Georgia	W	W	W	W	W	W	W	W	W	W
Hawaii	--	--	--	--	--	--	--	--	--	--
Idaho	--	--	W	W	--	--	--	--	23	168
Illinois	3,670	39,200	8,910	119,000	2,590	21,600	392	5,050	4,780	44,000
Indiana	2,190	21,000	7,140	59,800	5,560	49,500	1,080	8,690	4,930	35,700
Iowa	776	11,100	235	2,560	2,680	30,500	78	1,560	1,180	12,700
Kansas	W	W	578	6,340	2,070	16,700	76	1,070	676	4,950
Kentucky	1,740	19,100	4,910	56,200	2,230	24,100	483	5,880	7,730	70,900
Louisiana	W	W	W	W	W	W	W	W	W	W
Maine	36	190	--	--	28	207	--	--	--	--
Maryland	1,300	17,400	3,530	44,400	829	9,900	414	4,900	1,030	9,380
Massachusetts	W	W	W	W	W	W	--	--	W	W
Michigan	1,890	14,400	3,090	38,300	1,950	13,500	338	3,760	1,630	11,300
Minnesota	W	W	W	W	479	4,610	39	1,250	140	1,890
Mississippi ²	W	W	W	W	W	W	W	W	W	W
Missouri	2,070	17,300	1,280	14,700	3,420	20,100	1,800	11,000	1,730	14,300
Montana	--	--	W	W	W	W	W	W	W	W
Nebraska	W	W	W	W	W	W	1	22	W	W
Nevada	--	--	--	--	--	--	--	--	--	--
New Hampshire	--	--	--	--	--	--	--	--	--	--
New Jersey	--	--	--	--	--	--	--	--	--	--
New Mexico	W	W	W	W	62	734	W	W	37	337
New York	1,170	16,000	1,830	26,500	514	5,780	76	1,170	3,580	36,700
North Carolina	W	W	W	W	W	W	W	W	W	W
North Dakota	--	--	--	--	--	--	--	--	--	--
Ohio	2,510	21,300	4,910	58,400	11,300	117,000	241	2,420	4,040	34,700
Oklahoma	318	2,660	407	4,140	1,500	11,900	34	504	1,410	11,000
Oregon	--	--	--	--	--	--	--	--	--	--
Pennsylvania	3,560	44,600	9,060	106,000	4,640	53,900	181	3,260	5,990	53,500
Rhode Island	--	--	--	--	--	--	--	--	--	--
South Carolina	--	--	30	602	W	W	--	--	W	W
South Dakota	--	--	--	--	--	--	W	W	W	W
Tennessee	2,840	42,900	8,150	129,000	2,130	26,800	264	4,030	18,400	218,000
Texas	6,000	67,200	19,400	346,000	6,760	50,400	741	9,910	13,700	201,000
Utah	--	--	W	W	W	W	W	W	W	W
Vermont	W	W	W	W	W	W	W	W	W	W
Virginia	528	7,170	1,020	14,200	792	9,150	136	2,630	1,500	19,000
Washington	--	--	W	W	57	480	3	96	W	W
West Virginia	38	341	684	8,320	411	4,820	W	W	946	15,800
Wisconsin	519	5,480	725	6,250	2,100	14,000	W	W	443	2,270
Wyoming	300	3,400	44	251	113	776	8	139	38	486
Total	45,000	564,000	93,900	1,370,000	56,900	533,000	6,610	70,800	92,900	963,000
Total withheld	1,880	29,300	3,230	60,500	1,380	24,100	236	4,090	5,110	88,300
Grand total	46,900	593,000	97,100	1,430,000	58,200	557,000	6,840	74,900	98,000	1,050,000

See footnotes at end of table.

TABLE 11—Continued
LIMESTONE AND DOLOMITE SOLD OR USED BY PRODUCERS IN 2016, BY STATE AND USE¹

(Thousand metric tons and thousand dollars)

State	Cement manufacture		Agricultural uses		Lime manufacture		Other uses		Total	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Alabama	W	W	W	W	7,620	69,700	9,140	115,000	31,200	355,000
Alaska	--	--	--	--	--	--	--	--	--	--
Arizona	W	W	--	--	W	W	195	2,670	3,120	29,200
Arkansas	W	W	W	W	W	W	10,200	88,100	14,700	116,000
California	4,630	9,440	144	3,310	W	W	10,400	67,700	15,700	86,800
Colorado	W	W	--	--	--	--	W	W	908	14,300
Connecticut	--	--	11	106	--	--	1,340	22,500	1,370	22,900
Delaware	--	--	--	--	--	--	W	W	(3)	(3)
Florida	8,020	34,800	183	1,580	266	3,050	22,300	296,000	72,300	922,000
Georgia	919	8,100	--	--	--	--	863	15,000	4,440	65,500
Hawaii	--	--	--	--	--	--	--	--	--	--
Idaho	--	--	W	W	--	--	W	W	145	4,540
Illinois	W	W	1,460	12,700	W	W	28,600	296,000	51,900	558,000
Indiana	1,990	7,780	1,400	10,300	--	--	22,500	195,000	46,800	388,000
Iowa	781	9,630	383	3,800	2,030	23,900	29,500	307,000	37,600	403,000
Kansas	W	W	50	266	--	--	10,900	100,000	16,300	149,000
Kentucky	--	--	416	2,780	4,150	32,400	27,500	254,000	49,100	465,000
Louisiana	--	--	W	W	--	--	W	W	(3)	(3)
Maine	--	--	--	--	--	--	1,400	8,890	1,460	9,280
Maryland	W	W	W	W	--	--	1,810	23,400	12,300	125,000
Massachusetts	--	--	--	--	--	--	1,400	24,300	1,840	29,700
Michigan	W	W	W	W	W	W	10,900	84,600	27,400	197,000
Minnesota	--	--	68	520	--	--	2,560	29,200	3,400	38,600
Mississippi ²	--	--	W	W	--	--	751	21,800	2,110	62,100
Missouri	6,340	26,300	490	3,140	8,750	43,400	39,500	332,000	65,400	483,000
Montana	W	W	W	W	W	W	W	W	2,000	17,600
Nebraska	W	W	728	9,580	--	--	4,480	58,900	7,570	97,200
Nevada	W	W	W	W	W	W	W	W	3,850	28,300
New Hampshire	--	--	--	--	--	--	--	--	--	--
New Jersey	--	--	--	--	--	--	534	4,860	534	4,860
New Mexico	570	5,030	--	--	--	--	914	9,030	2,330	19,800
New York	W	W	41	449	W	W	22,100	264,000	30,000	358,000
North Carolina	--	--	--	--	--	--	3,030	50,500	3,220	53,500
North Dakota	--	--	--	--	--	--	--	--	--	--
Ohio	W	W	328	3,960	W	W	35,000	336,000	59,200	581,000
Oklahoma	W	W	97	1,320	W	W	25,600	229,000	30,800	275,000
Oregon	1,220	5,360	--	--	509	3,380	--	--	1,720	8,740
Pennsylvania	W	W	445	8,440	W	W	32,700	428,000	60,200	733,000
Rhode Island	--	--	--	--	--	--	--	--	--	--
South Carolina	2,320	6,380	35	464	--	--	2,360	28,200	5,790	50,800
South Dakota	877	2,560	--	--	--	--	1,600	11,900	2,520	14,700
Tennessee	W	W	179	2,580	W	W	9,120	105,000	42,600	539,000
Texas	15,700	82,000	607	8,000	2,680	11,300	81,100	776,000	147,000	1,550,000
Utah	W	W	W	W	W	W	3,240	28,300	5,840	43,400
Vermont	--	--	W	W	--	--	1,790	18,400	2,220	21,900
Virginia	--	--	477	11,400	1,010	7,930	15,400	230,000	20,800	301,000
Washington	799	10,800	W	W	67	706	333	14,600	1,280	27,200
West Virginia	--	--	W	W	--	--	11,400	119,000	13,600	150,000
Wisconsin	--	--	300	4,290	W	W	14,100	98,200	18,200	131,000
Wyoming	791	5,170	--	--	--	--	1,730	9,750	3,020	20,000
Total	45,000	213,000	7,840	89,000	27,100	196,000	498,000	5,100,000	XX	XX
Total withheld	25,900	176,000	1,350	21,600	12,600	102,000	1,950	24,100	XX	XX
Grand total	70,900	389,000	9,200	111,000	39,700	298,000	500,000	5,130,000	927,000	9,630,000

W Withheld to avoid disclosing company proprietary data; included in "Total withheld." XX Not applicable. -- Zero.

¹Table includes data available through July 13, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²A significant amount of sold or used material was shipped in from other States.

³Withheld to avoid disclosing company proprietary data; included in "Grand total."

TABLE 12
 GRANITE, TRAPROCK, SANDSTONE AND QUARTZITE SOLD OR USED BY PRODUCERS IN THE UNITED STATES IN 2016, BY USE¹

(Thousand metric tons and thousand dollars)

Use	Granite		Traprock		Sandstone and quartzite ²	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1½ inch):						
Macadam	W	W	155	1,810	W	W
Riprap and jetty stone	694	11,300	523	10,100	229	3,910
Filter stone	75	1,140	137	1,780	97	1,730
Unspecified coarse aggregate	1,290	28,900	2,140	19,600	351	2,980
Coarse aggregate, graded:						
Concrete aggregate, coarse	2,940	43,800	2,390	34,200	171	1,780
Bituminous aggregate, coarse	3,250	40,400	1,400	16,900	143	1,460
Bituminous surface-treatment aggregate	292	6,550	460	6,070	W	W
Railroad ballast	1,940	25,300	2,120	23,100	14	292
Unspecified graded coarse aggregate	25,300	473,000	7,610	109,000	1,310	15,700
Fine aggregate (-¾ inch):						
Stone sand, concrete	352	4,660	422	6,650	435	7,060
Stone sand, bituminous mix or seal	1,250	12,700	1,010	10,900	54	704
Screening, undesignated	1,280	13,800	581	5,740	145	2,010
Unspecified fine aggregate	8,530	121,000	2,760	26,700	1,220	17,100
Coarse and fine aggregates:						
Graded road base or subbase	3,360	35,800	5,420	52,300	1,210	10,200
Unpaved road surfacing	380	3,960	549	3,650	82	1,040
Terrazzo and exposed aggregate	1,300	22,500	W	W	348	5,840
Crusher run or fill or waste	1,510	17,100	645	8,930	460	4,360
Roofing granules	W	W	W	W	W	W
Unspecified coarse and fine aggregates	19,900	239,000	6,050	80,200	1,530	10,800
Unspecified and other construction materials	556	8,730	63	989	49	1,340
Agricultural:						
Agricultural limestone	--	--	--	--	--	--
Poultry grit and mineral food	W	W	--	--	--	--
Unspecified and other agricultural uses	--	--	--	--	--	--
Chemical and metallurgical:						
Cement manufacture	--	--	--	--	W	W
Lime manufacture	--	--	--	--	--	--
Dead-burned dolomite manufacture	--	--	--	--	--	--
Flux stone	--	--	--	--	W	W
Chemical stone	--	--	--	--	--	--
Glass manufacture	--	--	--	--	--	--
Sulfur oxide removal	--	--	--	--	--	--
Special:						
Mine dusting or acid water treatment	--	--	--	--	--	--
Asphalt fillers or extenders	W	W	--	--	--	--
Whiting or whiting substitute	--	--	--	--	--	--
Other fillers or extenders	--	--	--	--	W	W
Other miscellaneous uses and specified uses not listed	193	858	55	616	280	13,100
Unspecified:³						
Reported	88,600	1,190,000	28,800	390,000	18,300	199,000
Estimated	44,200	560,000	22,400	282,000	19,500	187,000
Total	208,000	2,880,000	86,400	1,210,000	48,400	502,000

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

¹Table includes data available through July 13, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes sandstone-quartzite reported with no distinction between the two kinds of stone.

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

TABLE 13
MARBLE, VOLCANIC CINDER AND SCORIA, AND MISCELLANEOUS STONE SOLD OR USED BY PRODUCERS IN THE UNITED STATES
IN 2016, BY USE¹

(Thousand metric tons and thousand dollars)

Use	Marble		Volcanic cinder and scoria		Miscellaneous stone	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1½ inch):						
Macadam	--	--	--	--	W	W
Riprap and jetty stone	W	W	W	W	213	5,900
Filter stone	--	--	--	--	66	808
Unspecified coarse aggregate	45	787	2	38	432	5,210
Coarse aggregate, graded:						
Concrete aggregate, coarse	W	W	W	W	1,000	15,600
Bituminous aggregate, coarse	W	W	--	--	468	5,140
Bituminous surface-treatment aggregate	W	W	--	--	W	W
Railroad ballast	--	--	--	--	1,160	11,200
Unspecified graded coarse aggregate	285	4,160	13	278	2,710	33,800
Fine aggregate (-¾ inch):						
Stone sand, concrete	W	W	W	W	255	2,840
Stone sand, bituminous mix or seal	W	W	--	--	361	3,040
Screening, undesignated	W	W	--	--	103	937
Unspecified fine aggregate	W	W	4	92	1,100	13,000
Coarse and fine aggregates:						
Graded road base or subbase	W	W	--	--	3,450	29,500
Unpaved road surfacing	--	--	W	W	197	1,670
Terrazzo and exposed aggregate	W	W	W	W	51	880
Crusher run or fill or waste	W	W	5	27	727	7,500
Roofing granules	--	--	--	--	--	--
Unspecified coarse and fine aggregates	W	W	196	1,310	3,270	26,100
Unspecified and other construction materials	W	W	W	W	277	3,920
Agricultural:						
Agricultural limestone	--	--	--	--	--	--
Poultry grit and mineral food	W	W	--	--	--	--
Unspecified and other agricultural uses	W	W	--	--	38	148
Chemical and metallurgical:						
Cement manufacture	--	--	--	--	428	3,220
Lime manufacture	--	--	--	--	--	--
Dead-burned dolomite manufacture	--	--	--	--	--	--
Flux stone	--	--	--	--	--	--
Chemical stone	--	--	--	--	--	--
Glass manufacture	--	--	--	--	--	--
Sulfur oxide removal	--	--	--	--	--	--
Special:						
Mine dusting or acid water treatment	W	W	--	--	--	--
Asphalt fillers or extenders	--	--	--	--	--	--
Whiting or whiting substitute	W	W	--	--	--	--
Other fillers or extenders	W	W	--	--	W	W
Other miscellaneous uses and specified uses not listed	154	4,070	119	873	143	2,960
Unspecified:²						
Reported	--	--	1,690	2,850	14,500	122,000
Estimated	3,640	34,300	920	8,610	42,300	454,000
Total	6,090	88,200	3,240	17,600	73,400	755,000

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

¹Table includes data available through July 13, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

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

TABLE 14
RECYCLED ASPHALT CONCRETE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY STATE¹

State	2015 ²			2016		
	Quantity (thousand metric tons)	Value (thousands)	Unit value	Quantity (thousand metric tons)	Value (thousands)	Unit value
Alabama	313	\$2,900	\$9.26	168	\$1,270	\$7.54
Alaska	101	1,380	13.64	124	1,420	11.42
Arizona	202	2,280	11.29	247	2,520	10.22
Arkansas	90	965	10.72	90	947	10.52
California	2,840	22,800	8.06	3,040	24,300	7.99
Colorado	456	3,270	7.16	498	3,340	6.71
Connecticut	586	4,070	6.95	575	3,860	6.72
Delaware	100	643	6.43	100	643	6.43
Florida	396	3,560	9.01	396	3,560	9.01
Georgia	282	2,870	10.16	318	3,030	9.54
Hawaii	--	--	--	--	--	--
Idaho	317	2,250	7.08	371	2,600	7.01
Illinois	2,000	13,600	6.81	2,030	13,600	6.68
Indiana	178	1,350	7.61	180	1,360	7.54
Iowa	365	2,130	5.84	585	2,630	4.49
Kansas	566	1,710	3.02	556	1,540	2.77
Kentucky	1,090	7,340	6.75	1,090	7,370	6.75
Louisiana	74	493	6.66	97	687	7.08
Maine	242	3,640	15.04	229	3,290	14.34
Maryland	355	2,060	5.79	360	2,110	5.87
Massachusetts	425	4,020	9.46	438	4,190	9.56
Michigan	855	4,220	4.93	724	3,980	5.49
Minnesota	1,410	12,700	9.00	1,860	14,600	7.86
Mississippi	4	43	10.75	4	43	10.75
Missouri	280	2,130	7.61	285	2,220	7.79
Montana	156	1,530	9.81	156	1,550	9.91
Nebraska	140	1,030	7.39	116	1,220	10.54
Nevada	402	3,040	7.56	311	2,470	7.95
New Hampshire	283	2,640	9.33	318	2,820	8.86
New Jersey	180	1,520	8.43	173	1,500	8.68
New Mexico	602	4,130	6.86	176	1,320	7.52
New York	866	8,810	10.17	1,050	12,600	12.00
North Carolina	1,040	14,500	14.00	1,060	16,400	15.39
North Dakota	61	541	8.87	43	462	10.74
Ohio	70	539	7.70	89	664	7.46
Oklahoma	50	571	11.42	50	571	11.42
Oregon	108	1,020	9.45	130	1,240	9.50
Pennsylvania	488	4,950	10.14	527	5,630	10.69
Rhode Island	108	1,080	9.98	125	1,400	11.22
South Carolina	276	3,450	12.50	264	3,630	13.74
South Dakota	184	1,660	9.03	207	2,070	9.99
Tennessee	336	3,000	8.91	354	3,160	8.92
Texas	441	3,280	7.44	570	4,190	7.36
Utah	295	2,340	7.92	310	2,390	7.71
Vermont	150	2,460	16.42	147	2,180	14.84
Virginia	333	3,550	10.65	331	2,920	8.83
Washington	1,000	8,300	8.27	1,030	8,400	8.19
West Virginia	--	--	--	9	115	13
Wisconsin	417	3,430	8.22	423	3,430	8.11
Wyoming	26	494	19.00	31	207	6.68
Total or average	21,500	180,000	8.37	22,400	188,000	8.39

-- Zero.

¹Table includes data available through July 13, 2018. Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

²Estimated quantities have been recalculated.

TABLE 15
 RECYCLED PORTLAND CEMENT CONCRETE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY STATE¹

State	2015 ²			2016		
	Quantity (thousand metric tons)	Value (thousands)	Unit value	Quantity (thousand metric tons)	Value (thousands)	Unit value
Alabama	7	\$127	\$18.14	--	--	--
Alaska	27	449	16.63	22	\$364	\$16.55
Arizona	199	1,610	8.07	171	1,440	8.41
Arkansas	1	9	9.00	1	9	9.00
California	4,760	32,500	6.83	5,000	39,000	7.81
Colorado	815	5,660	6.94	730	5,320	7.29
Connecticut	65	573	8.82	74	538	7.27
Delaware	122	930	7.62	122	930	7.62
Florida	812	4,260	5.24	809	4,230	5.22
Georgia	173	1,350	7.80	173	2,370	13.67
Hawaii	2	28	14.00	2	28	14
Idaho	208	2,250	10.80	209	2,250	10.75
Illinois	2,340	16,000	6.85	2,260	15,400	6.83
Indiana	130	1,190	9.14	134	1,220	9.09
Iowa	1,400	7,630	5.45	977	4,800	4.91
Kansas	381	3,460	9.09	363	3,490	9.61
Kentucky	--	--	--	--	--	--
Louisiana	8	131	16.38	20	300	15.00
Maine	66	522	7.91	71	512	7.21
Maryland	624	4,230	6.78	625	4,250	6.80
Massachusetts	368	2,770	7.51	334	2,570	7.69
Michigan	943	5,420	5.75	953	5,820	6.11
Minnesota	1,820	11,700	6.44	1,600	10,200	6.41
Mississippi	69	519	7.52	71	581	8.18
Missouri	22	150	6.82	15	104	6.93
Montana	18	201	11.17	19	207	10.89
Nebraska	115	1,320	11.49	113	1,300	11.54
Nevada	168	1,190	7.10	183	1,330	7.28
New Hampshire	98	713	7.28	97	692	7.13
New Jersey	331	2,660	8.03	334	2,670	7.99
New Mexico	108	1,000	9.28	199	1,810	9.09
New York	270	2,050	7.60	400	3,160	7.89
North Carolina	345	4,560	13.21	383	5,010	13.09
North Dakota	54	319	5.91	32	216	6.75
Ohio	374	3,260	8.71	333	2,810	8.43
Oklahoma	542	6,210	11.46	548	6,220	11.35
Oregon	132	962	7.29	131	971	7.41
Pennsylvania	143	1,100	7.69	195	1,400	7.16
Rhode Island	581	4,800	8.27	584	4,850	8.30
South Carolina	300	3,250	10.83	242	2,490	10.29
South Dakota	174	1,240	7.10	203	1,450	7.15
Tennessee	51	362	7.10	31	232	7.48
Texas	4,590	39,000	8.48	4,920	41,500	8.42
Utah	474	3,060	6.46	541	3,220	5.95
Vermont	62	589	9.50	56	379	6.77
Virginia	965	8,840	9.16	908	8,840	9.73
Washington	622	5,710	9.17	627	5,960	9.50
West Virginia	--	--	--	--	--	--
Wisconsin	627	3,680	5.88	682	3,990	5.85
Wyoming	23	134	5.83	32	238	7.44
Total or average	26,500	200,000	7.53	26,500	207,000	7.79

-- Zero.

¹Table includes data available through July 13, 2018. Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

²Estimated quantities have been recalculated.

TABLE 16
CRUSHED AND BROKEN STONE OPERATIONS IN THE UNITED STATES IN 2016, BY STATE¹

State	Active operations	Active quarries	Dredging operations	Processing plants				Sales yards
				Stationary	Portable	Stationary and portable	None or unspecified	
Alabama	79	70	--	60	8	--	2	9
Alaska	21	21	--	5	11	--	3	2
Arizona	48	47	--	23	18	5	1	1
Arkansas	73	71	--	33	27	5	4	4
California	150	131	1	65	36	14	11	23
Colorado	38	32	--	14	11	3	3	7
Connecticut	38	35	--	19	14	1	1	3
Delaware	4	--	--	--	--	--	--	4
Florida	114	88	3	36	31	13	3	28
Georgia	93	83	--	69	6	1	6	11
Hawaii	23	21	--	9	9	3	--	2
Idaho	38	59	--	5	24	1	8	--
Illinois	147	119	1	69	39	6	4	28
Indiana	93	89	--	80	5	1	3	4
Iowa	161	196	1	25	124	--	9	2
Kansas	77	89	--	21	48	--	4	4
Kentucky	93	92	--	66	18	7	--	2
Louisiana	16	3	--	1	2	--	--	13
Maine	30	25	--	14	8	2	1	5
Maryland	45	30	--	25	2	--	2	16
Massachusetts	45	40	--	25	10	3	2	5
Michigan	33	32	--	15	11	--	2	5
Minnesota	52	91	--	9	32	2	3	6
Mississippi	20	3	--	2	1	--	--	17
Missouri	203	215	--	99	83	9	8	4
Montana	14	24	--	7	6	--	1	--
Nebraska	16	12	--	6	6	--	--	4
Nevada	25	24	--	14	7	2	--	2
New Hampshire	27	25	--	11	10	2	2	2
New Jersey	23	18	--	15	--	2	--	6
New Mexico	38	41	--	12	19	3	2	2
New York	131	127	2	80	26	15	2	6
North Carolina	140	120	--	100	14	4	1	21
North Dakota	14	13	--	--	12	--	1	1
Ohio	125	114	--	74	21	10	6	14
Oklahoma	74	75	--	52	10	4	6	2
Oregon	156	194	--	39	109	4	2	2
Pennsylvania	266	269	--	170	56	16	15	9
Rhode Island	9	7	--	5	2	--	--	2
South Carolina	44	36	--	29	4	3	--	8
South Dakota	18	15	--	11	4	--	--	3
Tennessee	135	130	--	107	15	3	4	6
Texas	278	256	--	110	109	12	14	33
Utah	25	22	--	9	8	--	4	4
Vermont	45	49	--	14	23	5	3	--
Virginia	118	99	--	81	11	4	--	22
Washington	86	96	--	27	43	4	7	5
West Virginia	30	26	--	21	1	2	1	5
Wisconsin	146	206	--	37	87	4	11	7
Wyoming	31	31	--	9	17	2	3	--
Total	3,748	3,711	8	1,829	1,198	177	165	371

-- Zero.

¹Table includes data available through July 13, 2018. Includes recycling plants.

TABLE 17
U.S. EXPORTS OF CRUSHED STONE IN 2016, BY DESTINATION¹

Destination		Limestone ²	Limestone for cement manufacturing ³	Chalk, crude ⁴	Granules, chippings ⁵	Other ⁶	Total
North America:	metric tons						
Bahamas, The	do.	1,290	385	--	180	60	1,920
Bermuda	do.	--	20	--	13	52	85
British Virgin Islands	do.	--	2	--	--	3,600	3,600
Canada	do.	375,000	27,200	50	33,400	41,900	478,000
Costa Rica	do.	--	52	--	413	50	515
Guadeloupe	do.	--	--	--	--	7,220	7,220
Guatemala	do.	--	--	--	261	20	281
Mexico	do.	134	49	3	4,580	100	4,870
Nicaragua	do.	--	--	--	1,710	--	1,710
Panama	do.	--	--	--	--	1,340	1,340
Sint Maarten	do.	--	--	--	--	10,800	10,800
Saint Kitts and Nevis	do.	--	--	--	--	3,600	3,600
Trinidad and Tobago	do.	--	32	--	1,450	8	1,490
Other	do.	--	125	--	246	2,500	2,870
Total	do.	377,000	27,800	53	42,200	71,300	518,000
South America	do.	11	54	4	2,940	65	3,080
Europe	do.	986	283	2	1,240	356	2,870
Asia	do.	2	277	7	4,970	790	6,050
Oceania	do.	17	15	(7)	--	14	46
Africa	do.	--	2	--	--	--	2
Grand total:							
Quantity	do.	378,000	28,500	66	51,400	72,500	530,000
Value	thousands	\$10,300	\$12,000	\$534	\$12,300	\$11,900	\$47,100

do. Ditto. -- Zero.

¹Table includes data available through July 13, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes Harmonized Tariff Schedule of the United States (HTS) code 2517.10.0020.

³Includes HTS code 2521.00.0000.

⁴Includes HTS code 2509.00.1000.

⁵Includes HTS code 2517.41.0000 and 2517.49.0000.

⁶Includes HTS code 2517.10.0055.

⁷Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 18
U.S. IMPORTS OF CRUSHED STONE AND CALCIUM CARBONATE FINES, BY TYPE¹

Type	2015			2016		
	Quantity (thousand metric tons)	Value, c.i.f. ² (thousands)	Unit value	Quantity (thousand metric tons)	Value, c.i.f. ² (thousands)	Unit value
Crushed stone and chips:						
Limestone ³	15,100	\$114,000 ^r	\$7.52 ^r	13,600	\$101,000	\$7.47
Limestone for flux or cement manufacturing ⁴	1,190	12,600 ^r	10.63 ^r	983	10,600	10.76
Other ⁵	3,580 ^r	72,100 ^r	20.14 ^r	5,180	69,700	13.46
Total	19,900 ^r	199,000 ^r	XX	19,700	182,000	XX
Calcium carbonate fines:⁶						
Natural chalk ⁷	(8)	5 ^r	112.77 ^r	5	236	50.00
Calcium carbonates, other chalk ⁹	4	1,600 ^r	394.00 ^r	3	1,670	644.94
Total or average	4	1,600 ^r	XX	7	1,910	XX
Grand total or average	19,900 ^r	200,000 ^r	XX	19,700	184,000	XX

^rRevised. XX Not applicable.

¹Table includes data available through July 13, 2018. Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

²Cost, insurance, and freight value.

³Includes Harmonized Tariff Schedule of the United States (HTS) code 2517.10.0020.

⁴Includes HTS code 2521.00.0000.

⁵Includes HTS code 2517.10.0055, 2517.41.0000, and 2517.49.0000.

⁶Excludes precipitated calcium carbonate.

⁷Includes HTS code 2509.00.1000.

⁸Less than ½ unit.

⁹Includes HTS code 2509.00.2000.

Source: U.S. Census Bureau.

TABLE 19
THE TOP 100 PRODUCERS OF CRUSHED STONE IN THE UNITED STATES^{1,2}

2016 rank	2015 rank [†]	Company	2016 rank	2015 rank [†]	Company
1	1	Vulcan Materials Co.	51	70	Anchor Stone Co.
2	2	Martin Marietta Aggregates	52	53	American Infrastructure
3	3	Oldcastle Materials, Inc.	53	67	Granite Construction, Inc.
4	4	Lehigh Hanson, Inc.	54	64	The Kraemer Co., LLC
5	5	LafargeHolcim Ltd	55	65	The DePaul Group
6	6	CEMEX S.A.B. de C.V.	56	73	The Olen Corp.
7	8	Rogers Group, Inc.	57	69	Haydon Materials, LLC
8	7	Carmeuse Lime & Stone Inc.	58	55	Greer Industries, Inc.
9	13	Luck Stone Corp.	59	54	Snyder Associated Cos., Inc.
10	10	Lhoist North America	60	62	Imerys S.A.
11	11	New Enterprise Stone & Lime Co., Inc.	61	60	Albert Frei & Sons, Inc.
12	14	Ash Grove Cement Co.	62	74	Mitsubishi Cement Corp.
13	16	Bluegrass Materials Co.	63	46	Boxley Materials Co.
14	12	Summit Materials, LLC	64	77	Chantilly Crushed Stone, Inc.
15	15	Dolese Bros. Co.	65	76	Glasgow, Inc.
16	20	Vecellio & Grogan, Inc.	66	61	Glenn O. Hawbaker, Inc.
17	18	National Lime & Stone Co.	67	83	Bruening Rock Products, Inc.
18	24	Eucon Corp.	68	88	Las Vegas Paving Corp.
19	21	Buzzi Unicem USA, Inc.	69	72	Salem Stone Corp.
20	22	Mulzer Crushed Stone, Inc.	70	75	Youngquist Brothers Rock Inc.
21	28	MDU Resources Group, Inc.	71	71	L. G. Everist, Inc.
22	23	Eagle Materials Inc.	72	86	United States Lime and Minerals, Inc.
23	25	The H&K Group	73	79	The Vicat Group
24	29	Aggregates USA, LLC.	74	84	RiverStone Group, Inc.
25	27	Texas Crushed Stone Co.	75	91	Hedrick Industries
26	40	Cementos Argos S. A.	76	58	Wendling Quarries, Inc.
27	35	Carolina Sunrock	77	82	Peckham Industries, Inc.
28	17	Titan America LLC	78	59	CSA Materials, Inc.
29	26	Fred Weber, Inc.	79	87	Rockydale Quarries Corp.
30	30	Graymont Ltd.	80	85	Weldon Materials, Inc.
31	32	Mississippi Lime Co.	81	—	Higgins Asphalt Paving Co., Inc
32	34	Colorado Materials, Ltd.	82	93	Warren Paving, Inc.
33	36	3M Co.	83	97	Dyer Quarry, Inc.
34	31	The Heritage Group	84	78	Mathy Construction Co.
35	33	Aggregate Management, Inc.	85	98	River Products Co., Inc.
36	41	Wake Stone Corp.	86	—	Bjoin Limestone Inc.
37	38	Irving Materials, Inc.	87	—	Minerals Technologies Inc.
38	39	Tower Rock Stone Co.	88	94	The Allen Co., Inc.
39	43	The Melvin Stone Co.	89	—	J.M. Huber Corp.
40	44	Capitol Aggregates, Ltd.	90	90	Junction City Mining Company, LLC
41	45	Frontera Materials, Inc.	91	—	Palm Beach Aggregates, Inc.
42	48	Hoover, Inc.	92	95	The East Fairfield Coal Co. LLC
43	42	Pine Bluff Sand & Gravel Co.	93	89	Frost Crushed Stone Co., Inc.
44	47	VantaCore Partners LP	94	—	Capital Materials
45	49	Colas Inc.	95	68	Stavola Construction Materials, Inc.
46	19	Bureau of Land Management	96	—	ISP Minerals, Inc.
47	57	McGeorge Contracting Co.	97	—	S.M. Lorusso & Sons, Inc.
48	52	Schildberg Construction Co., Inc.	98	—	Linwood Mining & Minerals Corp.
49	66	Graniterock Co.	99	99	Kerford Limestone Co.
50	50	CalPortland	100	—	Pounding Mill Quarry Corp.

[†]Revised.

— Not in the top 100 producers of crushed stone in the United States in 2015.

¹Table includes data available through July 13, 2018. Companies listed in descending order of tonnage produced.

²Rankings for the previous year have been recalculated.

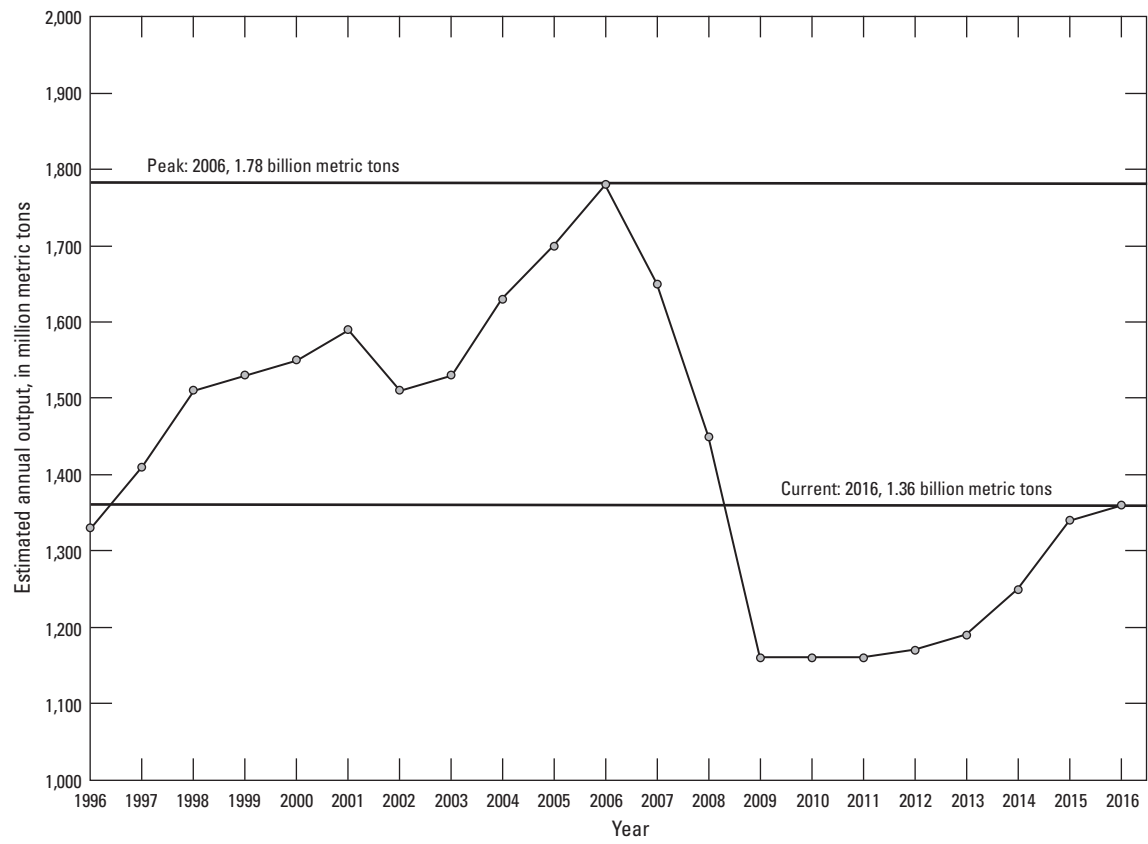


Figure 1. Annual output of crushed stone produced for consumption in the United States from 1996 through 2016.