



2018 Minerals Yearbook

**SAND AND GRAVEL, CONSTRUCTION [ADVANCE
RELEASE]**

SAND AND GRAVEL, CONSTRUCTION

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Domestic survey data and tables were prepared by Darlene V. Thompson, statistical assistant, and the author.

A total of 912 million metric tons (Mt) of construction sand and gravel was produced for consumption in the United States in 2018, an increase of 3% compared with the total production in 2017 (table 1) but 32% less than the record high of 1.34 billion metric tons in 2006 (fig. 1). In 2018, the total value of construction sand and gravel produced in the United States was \$8.3 billion, an increase of 6% compared with that in 2017. The average unit value for construction sand and gravel increased by 3% compared with the average unit value for 2017. Employment increased in 2018 from that in 2017 at operations identified as producing construction sand and gravel by the Mine Safety and Health Administration (MSHA).

U.S. foreign trade in construction sand and gravel remained relatively small compared with U.S. consumption. In 2018, U.S. exports doubled to 78,500 metric tons (t) compared with 36,400 t in 2017 and the value increased to \$23.3 million (tables 1, 8). U.S. imports of construction sand and gravel decreased by 10% to 5.86 Mt and the value decreased slightly to \$73.0 million compared with 2017 (tables 1, 9). Apparent domestic consumption of construction sand and gravel, which is defined as production for consumption (sold or used) plus imports minus exports, increased by 3% to 920 Mt compared with that in 2017.

Construction sand and gravel is a traditional basic building material and is one of the earliest materials used by humans for dwellings and later for outdoor areas such as paths, roadways, and other constructs. Despite the relatively low, but increasing, unit value of its basic products, the construction sand and gravel industry is a major contributor to, and an indicator of, the economic well-being of the Nation. Sand and gravel is very accessible and is widely used throughout the United States and the world. As sand and gravel has become less available owing to resource constraints or economic conditions in some locales, builders began to crush bedrock to produce a manufactured sand and gravel often referred to as crushed stone. Construction aggregates are defined as the combination of crushed stone and construction sand and gravel. Both mineral commodities usually are included in any review of the National or State aggregates industry. Information on the crushed stone industry can be found in a separate chapter on crushed stone in the U.S. Geological Survey Minerals Yearbook, volume I, Metals and Minerals.

Production

Domestic production data for construction sand and gravel were derived by the U.S. Geological Survey (USGS) from voluntary surveys of U.S. producers. In 2018, a total of 3,577 companies produced or sold construction sand and gravel from 5,878 operations with 6,590 pits, 335 dredging operations, and 146 sales and (or) distribution sites (table 7).

Of the 5,878 active operations, 2,427 operations reported their production or sales to the USGS, and their total production was 420 Mt (46% of the U.S. total). Of the 2,427 reporting operations, 649 operations did not report a breakdown by end-use category. The total production of those 649 operations was 175 Mt (19% of the U.S. total) and is included in table 5 under “Unspecified, reported” uses.

Production from the nonresponding operations was estimated by using employment data provided by MSHA. The estimated output of the 3,451 nonrespondent operations was 492 Mt (54% of the U.S. total) and is included in table 5 under “Unspecified, estimated” uses.

A total of 712 construction sand and gravel operations were either idle or presumed idle in 2018 because no production report was received and no employment information was available to estimate production. Since the 2017 survey, 118 operations closed. Most of the idle or closed operations were small, temporary pits, some of which were operated by State or local governments.

Construction sand and gravel was produced in every State. The 10 leading producing States were, in descending order of tonnage, California, Texas, Arizona, Michigan, Minnesota, Washington, Colorado, Utah, Ohio, and New York. The combined production of the 10 leading States increased by 4% compared with that in 2017 and accounted for 54% of the U.S. total. The combined production of California and Texas accounted for 22% of the U.S. total and increased by 6% compared with that in 2017 (table 3).

A review of production by size of operation at the national level in 2018 indicated that 217 Mt of construction sand and gravel (24% of the U.S. total) was produced by 148 operations reporting production of more than 1 million metric tons per year (Mt/yr), 217 Mt was produced by 346 operations reporting production between 500,000 and 999,999 Mt/yr, and 378 Mt was produced by 1,834 operations reporting production between 100,000 and 499,999 Mt/yr (table 4A). Operations that produced less than 500,000 Mt/yr accounted for 52% of total construction sand and gravel produced in the United States. By geographic region, the Midwest had 2,166 active operations, the West had 1,785, the Northeast had 1,014, and the South had 894 (table 4B).

The leading U.S. producing companies in 2018 were, in descending order of tonnage, Oldcastle Materials, Inc.; Vulcan Materials Co.; Lehigh Hanson, Inc.; LafargeHolcim Ltd.; CEMEX S.A.B. de C.V.; MDU Resources Group, Inc.; Martin Marietta Materials, Inc.; Granite Construction Inc.; Teichert, Inc.; and CalPortland Co. (table 10). The combined production of the top 10 companies decreased slightly to 222 Mt (24% of the U.S. total). The combined production of the top 100 companies was 450 Mt (49% of the U.S. total).

Consumption

Construction sand and gravel production reported to the USGS is material that was either sold to other companies or consumers or was used by producers. Stockpiled production is not included in the reported quantities. The “sold or used” tonnage, therefore, represents the quantity of production including some imports released for domestic consumption or export in a given year. Because some of the construction sand and gravel producers did not report a breakdown by end-use category, their total production was included in the “Unspecified, reported” use category. The estimated production of nonrespondents was included in the “Unspecified, estimated” use category (table 5).

In 2018, U.S. apparent consumption of construction sand and gravel, which is defined as U.S. production for consumption, sold or used, plus imports minus exports, was 918 Mt, an increase of 3% compared with the apparent consumption in 2017. Of the 912 Mt of construction sand and gravel produced for consumption, 73% was reported or estimated without a breakdown by end-use category (table 5). Of the remaining construction sand and gravel produced for consumption, 44% was used as concrete aggregate; 22% was used for road base and coverings; 12% each for asphaltic concrete aggregate and other bituminous mixtures and construction fill; 7% for other miscellaneous uses; and the remainder was used for concrete products, filtration, golf course maintenance, plaster and guniting sands, railroad ballast, road stabilization, roofing granules, and snow and ice control.

The reported percentage consumption patterns for construction sand and gravel excluded 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.

Much of the construction sand and gravel consumption was for construction projects and quantities sold for these projects were dependent on trends in these industries. The value of the total construction put in place in 2018 increased by 4%, compared with that in 2017, to \$1.33 trillion. The value of total private construction increased by 4% to \$1.02 trillion. The value of total public construction increased by 5% to \$310 billion (U.S. Census Bureau, 2020).

Transportation

No means of transportation was reported by the producers for 710 Mt of the 912 Mt of construction sand and gravel produced for consumption in 2018. Of the remaining 202 Mt of construction sand and gravel, 82% was reported as being transported by truck from the pit or the processing plant to the first point of sale or use, 3% by waterway, and 2% by rail. About 24.5 Mt of the specified production was reported as not having been transported and, therefore, is assumed to have been used onsite.

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 construction-sand-and-gravel-producing companies. This value does not include transportation from the plant or yard to the consumer. It does, however, include all costs of mining, processing, in-plant transportation, overhead, and profit. In 2018, 967 operations responding to the annual survey reported the dollar value of their production for the current and previous year. The average unit value for operations that reported production was \$10.33 per metric ton in 2018, which was an increase of 5% compared with the reported average unit value of \$9.82 per metric ton in 2017. Leading U.S. producers increased prices by 2% to 4% in 2018 compared with prices in 2017. For those operations that reported production only, the unit values for specific end uses were estimated on the basis of reported values for those specific uses in the same State. The reported State average unit value 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 construction sand and gravel by major uses in the United States and each State can be found in table 3 (by State), table 5 (by use), and table 6 (by State and use).

Foreign Trade

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

Exports.—Exports of sand and gravel more than doubled to 78,500 t compared with 36,400 t in 2017 and the value increased to \$23.3 million (tables 1, 8). Canada, which was the leading destination in North America, received 20% of total sand exports and 71% of total gravel exports. Mexico, the second-ranked destination in North America, received 22% of total sand exports and 20% of total gravel exports. The average unit value of sand and gravel exports in 2018 was \$297 per metric ton, a decrease of 29% from \$420 per metric ton in 2017. These values may have been relatively high because some higher grade sand and gravel, such as industrial sand and gravel (especially hydraulic fracturing sand used in natural gas and oil drilling), may have been misclassified as construction sand and gravel.

Imports.—Imports of construction sand and gravel decreased by 10% to 5.9 Mt and the value decreased slightly to \$73.0 million compared with 2017 totals (tables 1, 9). Canada was the leading source of construction sand and gravel imports, with 94% of the total quantity (table 9). Mexico supplied 4%, and the remainder was supplied by several other countries. Imports of construction sand and gravel from Canada decreased by 11%, whereas imports from the Bahamas and Mexico increased. Based on detailed import data from the U.S. Census Bureau, imports of gravel from Canada decreased by 46% to 2.8 Mt in 2018 from 5.2 Mt in 2017. The average unit value of sand and gravel imports in 2018 was \$12.46 per ton compared with \$11.31 per ton in 2017. The average unit value of sand and gravel imports from Canada in 2018 was \$9.05 per ton, compared to \$8.72 per ton in 2017. The average unit value of sand and gravel imports from Canada through San Francisco, CA, in 2018 was \$7.94 per ton, compared to \$10.70 in 2017.

Outlook

The aggregates industry is a cyclical business, 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 was well documented and led to decreased consumption of construction sand and gravel. After 4 years of decline, residential construction appeared to stabilize in late 2010. Construction sand and gravel production remained almost flat starting in 2010 until increasing by 6% in 2015 compared with that in 2014, and production has slowly increased since 2015 (fig. 1). Construction sand and gravel production is expected to increase slightly in 2019 (Willett, 2020).

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TABLE 1
SALIENT U.S. CONSTRUCTION SAND AND GRAVEL STATISTICS¹

(Thousand metric tons and thousand dollars)

	2014	2015	2016	2017	2018
Sold or used by producers:²					
Quantity	829,000	880,000	885,000 ^r	888,000 ^r	912,000
Value	6,660,000	7,290,000	7,440,000 ^r	7,850,000 ^r	8,300,000
Exports:					
Quantity	87	70	32	36	79
Value	21,800	21,700	13,900	15,300	23,300
Imports for consumption:					
Quantity	3,930	3,890	3,490	6,520	5,860
Value	59,800 ^r	78,400 ^r	57,200 ^r	73,700 ^r	73,000
Average number of employees ³	34,600	34,800	35,300	36,500	38,600

^rRevised.

¹Table includes data available through May 31, 2021. Data are rounded to no more than three significant digits.

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

³Including office staff. Source: Mine Safety and Health Administration.

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

Region and division	2017 ³		2018	
	Quantity (thousand metric tons)	Value (thousands)	Quantity (thousand metric tons)	Value (thousands)
Northeast:				
New England	37,600	\$329,000	36,900	\$326,000
Middle Atlantic	52,900	527,000	51,300	510,000
Midwest:				
East North Central	141,000	1,010,000	139,000	1,040,000
West North Central	113,000	718,000	110,000	731,000
South:				
South Atlantic	61,000	583,000	65,400	632,000
East South Central	39,400	292,000	43,100	340,000
West South Central	117,000	1,230,000	118,000	1,260,000
West:				
Mountain	171,000	1,390,000	182,000	1,550,000
Pacific	154,000	1,760,000	167,000	1,910,000
Total	888,000	7,850,000	912,000	8,300,000

¹Table includes data available through May 31, 2021. 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 3
CONSTRUCTION SAND AND GRAVEL SOLD OR USED BY PRODUCERS IN
THE UNITED STATES, BY STATE¹

State	2017 ²			2018		
	Quantity (thousand metric tons)	Value (thousands)	Unit value	Quantity (thousand metric tons)	Value (thousands)	Unit value
Alabama	13,000	\$108,000	\$8.30	14,800	\$137,000	\$9.23
Alaska	5,160	44,300	8.58	6,930	54,600	7.89
Arizona	42,100	398,000	9.47	47,600	477,000	10.02
Arkansas	7,940	75,200	9.47	7,120	68,300	9.60
California	100,000	1,280,000	12.80	106,000	1,360,000	12.82
Colorado	34,100	285,000	8.35	34,900	306,000	8.76
Connecticut	4,810	46,900	9.75	4,610	45,000	9.78
Delaware	2,540	21,700	8.55	2,680	21,000	7.86
Florida	18,900	210,000	11.10	21,000	228,000	10.87
Georgia	5,610	39,400	7.02	6,080	41,400	6.80
Hawaii	449	9,170	20.43	378	7,630	20.21
Idaho	16,200	96,900	5.98	18,400	118,000	6.39
Illinois	21,500	152,000	7.07	20,300	145,000	7.16
Indiana	17,100	127,000	7.41	17,300	142,000	8.23
Iowa	16,200	144,000	8.93	16,300	156,000	9.55
Kansas	9,680	60,100	6.21	8,510	60,100	7.07
Kentucky	7,950	38,100	4.80	8,800	40,500	4.60
Louisiana	14,600	164,000	11.22	12,700	137,000	10.80
Maine	8,190	63,900	7.80	8,060	61,700	7.65
Maryland	7,750	96,300	12.42	7,850	110,000	13.96
Massachusetts	9,410	88,100	9.35	9,020	86,400	9.58
Michigan	42,900	261,000	6.10	43,500	285,000	6.54
Minnesota	42,600	210,000	4.92	40,500	201,000	4.96
Mississippi	11,100	90,500	8.15	11,400	98,100	8.59
Missouri	9,600	72,600	7.56	10,500	85,200	8.13
Montana	10,400	84,400	8.10	10,800	88,000	8.15
Nebraska	11,800	88,000	7.47	10,200	79,400	7.79
Nevada	19,200	119,000	6.22	19,400	118,000	6.06
New Hampshire	7,230	59,200	8.19	7,060	56,900	8.05
New Jersey	13,800	110,000	7.94	13,800	118,000	8.55
New Mexico	9,250	89,100	9.64	8,880	92,700	10.44
New York	30,200	325,000	10.75	29,600	309,000	10.45
North Carolina	8,840	55,600	6.29	8,910	58,700	6.58
North Dakota	12,600	92,400	7.35	12,700	103,000	8.10
Ohio	32,700	287,000	8.78	31,100	279,000	8.98
Oklahoma	9,140	85,300	9.34	8,400	75,400	8.97
Oregon	14,900	145,000	9.69	16,400	173,000	10.50
Pennsylvania	8,840	92,300	10.44	7,990	83,800	10.49
Rhode Island	2,420	29,900	12.34	2,840	37,800	13.31
South Carolina	8,380	50,500	6.02	9,090	52,600	5.79
South Dakota	10,800	51,100	4.75	10,900	46,500	4.26
Tennessee	7,340	55,900	7.61	8,010	64,900	8.10
Texas	85,200	903,000	10.59	90,100	975,000	10.82
Utah	31,700	246,000	7.75	32,400	256,000	7.90
Vermont	5,530	40,800	7.37	5,260	37,700	7.17
Virginia	8,450	105,000	12.47	9,290	116,000	12.51
Washington	33,800	284,000	8.40	37,100	319,000	8.60
West Virginia	501	4,250	8.49	530	4,500	8.49
Wisconsin	27,200	186,000	6.84	26,300	186,000	7.06
Wyoming	8,350	75,700	9.06	9,840	95,200	9.68
Total or average	888,000	7,850,000	8.84	912,000	8,300,000	9.09

¹Table includes data available through May 31, 2021. Data are rounded to no more than three significant digits, except unit values; may not add to totals shown.

²Estimated quantities have been recalculated.

TABLE 4A
CONSTRUCTION SAND AND GRAVEL PRODUCTION IN THE UNITED STATES, BY SIZE OF OPERATION¹

Size range (metric tons)	2017 ²				2018			
	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	1,801	30.2	16,100	1.8	1,814	31.0	15,300	1.7
25,000 to 49,999	873	14.6	28,400	3.2	823	14.0	26,800	2.9
50,000 to 99,999	963	16.1	63,000	7.1	894	15.3	58,500	6.4
100,000 to 199,999	937	15.7	121,000	13.6	941	16.1	122,000	13.4
200,000 to 299,999	475	8.0	105,000	11.9	445	7.6	99,400	10.9
300,000 to 399,999	276	4.6	86,800	9.8	279	4.8	87,900	9.6
400,000 to 499,999	158	2.6	64,300	7.2	169	2.9	68,500	7.5
500,000 to 599,999	127	2.1	62,800	7.1	121	2.1	59,800	6.6
600,000 to 699,999	81	1.4	47,500	5.3	76	1.3	44,600	4.9
700,000 to 799,999	52	0.9	35,500	4.0	52	0.9	35,000	3.8
800,000 to 899,999	51	0.9	39,200	4.4	63	1.1	48,300	5.3
900,000 to 999,999	37	0.6	31,700	3.6	34	0.6	29,300	3.2
1,000,000 to 1,499,999	80	1.3	86,400	9.7	88	1.5	94,600	10.4
1,500,000 and more	52	1.0	99,700	11.3	60	0.8	122,000	13.4
Total	5,963	100	888,000	100	5,859	100	912,000	100

¹Table includes data available through May 31, 2021. Production data are rounded to no more than three significant digits except "Number of operations"; may not add to totals shown. Does not include recycling plants.

²Estimated quantities have been recalculated.

TABLE 4B
CONSTRUCTION SAND AND GRAVEL PRODUCTION IN THE UNITED STATES IN 2018, BY REGION
AND SIZE OF OPERATION¹

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	410	40.4	3,410	3.9	686	31.7	5,760	2.3
25,000 to 49,999	178	17.6	5,760	6.5	347	16.0	11,200	4.5
50,000 to 99,999	146	14.4	9,340	10.6	388	17.9	25,300	10.2
100,000 to 199,999	154	15.2	20,300	23.0	368	17.0	47,100	19.0
200,000 to 299,999	53	5.2	11,300	12.8	137	6.3	30,500	12.3
300,000 to 399,999	32	3.2	10,200	11.5	84	3.9	26,500	10.7
400,000 to 499,999	13	1.3	5,230	5.9	47	2.2	18,800	7.6
500,000 to 599,999	7	0.7	3,370	3.8	31	1.4	15,200	6.1
600,000 to 699,999	1	0.1	608	0.7	28	1.3	16,500	6.6
700,000 to 799,999	5	0.5	3,350	3.8	14	0.6	9,410	3.8
800,000 to 899,999	5	0.5	3,830	4.3	12	0.6	9,190	3.7
900,000 to 999,999	3	0.3	2,620	3.0	2	0.1	1,810	0.7
1,000,000 to 1,499,999	5	0.5	5,590	6.3	12	0.6	13,100	5.3
1,500,000 and more	2	0.1	3,300	3.9	10	0.4	17,800	7.2
Total	1,014	100	88,200	100	2,166	100	248,000	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	184	20.6	1,470	0.6	534	29.9	4,650	1.3
25,000 to 49,999	76	8.5	2,470	1.1	222	12.4	7,310	2.1
50,000 to 99,999	101	11.3	6,600	2.9	259	14.5	17,300	4.9
100,000 to 199,999	154	17.2	20,300	9.0	265	14.8	34,300	9.8
200,000 to 299,999	99	11.1	22,300	9.8	156	8.7	35,300	10.1
300,000 to 399,999	77	8.6	24,100	10.6	86	4.8	27,100	7.8
400,000 to 499,999	50	5.6	20,400	9.0	59	3.3	24,100	6.9
500,000 to 599,999	36	4.0	18,000	8.0	47	2.6	23,200	6.7
600,000 to 699,999	21	2.3	12,300	5.4	26	1.5	15,200	4.4
700,000 to 799,999	16	1.8	10,800	4.7	17	1.0	11,500	3.3
800,000 to 899,999	26	2.9	20,200	8.9	20	1.1	15,100	4.3
900,000 to 999,999	11	1.2	9,420	4.2	18	1.0	15,500	4.4
1,000,000 to 1,499,999	29	3.2	30,900	13.6	42	2.4	45,000	12.9
1,500,000 and more	14	1.7	27,500	12.2	34	2.0	73,400	21.1
Total	894	100	227,000	100	1,785	100	349,000	100

¹Table includes data available through May 31, 2021. Production data are rounded to no more than three significant digits except "Number of operations"; may not add to totals shown.

TABLE 5
CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN THE UNITED STATES, BY USE¹

Use	2017 ²			2018		
	Quantity (thousand metric tons)	Value (thousands)	Unit value	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregates (including concrete sand)	111,000	\$1,120,000	\$10.13	109,000	\$1,160,000	\$10.60
Plaster and gunite sands	1,990	26,300	13.25	3,150	39,600	12.57
Concrete products (blocks, bricks, pipe, decorative, and so forth)	2,040	23,700	11.61	1,460	18,600	12.73
Asphaltic concrete aggregates and other bituminous mixtures	29,200	315,000	10.77	29,200	333,000	11.40
Road base and coverings	50,400	388,000	7.69	53,500	420,000	7.86
Road stabilization, cement	940	9,590	10.20	627	7,410	11.82
Road stabilization, lime	818	8,350	10.21	1,390	8,820	6.32
Fill	31,000	219,000	7.07	29,200	223,000	7.63
Snow and ice control	2,050	15,600	7.61	1,860	15,400	8.28
Railroad ballast	234	3,210	13.75	271	2,720	10.05
Roofing granules	--	--	--	--	--	--
Filtration	43	550	12.73	75	647	8.57
Golf course maintenance sand	64	2,050	31.96	42	548	13.13
Other miscellaneous uses and specified uses not listed	9,930	111,000	11.18	16,000	185,000	11.57
Unspecified: ³						
Reported	168,000	1,490,000	8.89	175,000	1,590,000	9.08
Estimated	480,000	4,110,000	8.55	492,000	4,300,000	8.74
Total or average	888,000	7,850,000	8.84	912,000	8,300,000	9.10

-- Zero.

¹Table includes data available through May 31, 2021. Data are rounded to no more than three significant digits, except unit values; may not add to totals shown.

²Estimated quantities have been recalculated.

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

TABLE 6
CONSTRUCTION SAND AND GRAVEL SOLD OR USED BY PRODUCERS IN 2018, BY STATE AND USE¹

(Thousand metric tons and thousand dollars)

State	Concrete aggregates (including concrete sand)		Plaster and gunitite sands		Concrete products (blocks, bricks, pipe, decorative, and so forth)		Asphaltic concrete aggregates and other bituminous mixtures		Road base and coverings ²	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Alabama	3,580	37,900	23	265	W	W	W	W	16	221
Alaska	W	W	--	--	W	W	95	1,280	147	2,990
Arizona	4,580	55,800	107	1,520	W	W	1,800	25,700	4,770	29,300
Arkansas	382	3,820	--	--	--	--	W	W	133	1,020
California	18,500	278,000	1,530	18,300	W	W	8,800	139,000	6,700	59,900
Colorado	3,550	36,600	27	420	W	W	300	3,920	2,880	26,200
Connecticut	340	3,120	--	--	W	W	W	W	122	1,540
Delaware	W	W	W	W	W	W	W	W	W	W
Florida	W	W	W	W	W	W	W	W	--	--
Georgia	W	W	--	--	W	W	W	W	23	132
Hawaii	(3)	5	--	--	--	--	--	--	--	--
Idaho	696	8,910	W	W	1	120	140	1,540	3,680	23,400
Illinois	2,660	16,600	W	W	W	W	364	2,720	299	2,820
Indiana	2,970	30,500	W	W	9	65	806	6,260	535	4,540
Iowa	1,410	12,600	W	W	1	13	70	525	1,060	5,750
Kansas	749	6,270	W	W	W	W	148	726	1,170	16,500
Kentucky	180	1,150	--	--	3	16	W	W	W	W
Louisiana	2,230	18,800	--	--	--	--	W	W	44	570
Maine	466	2,110	--	--	3	51	76	830	576	4,640
Maryland	2,760	39,000	W	W	W	W	105	1,560	W	W
Massachusetts	1,260	15,000	W	W	59	272	366	4,700	545	5,020
Michigan	1,990	16,300	1	11	193	2,080	1,650	11,300	3,470	22,100
Minnesota	5,720	26,300	W	W	W	W	3,130	18,300	5,430	22,800
Mississippi	1,230	8,710	W	W	W	W	41	850	128	1,290
Missouri	3,310	26,600	--	--	W	W	342	3,410	394	3,480
Montana	849	9,030	--	--	(3)	29	248	3,110	1,340	11,100
Nebraska	899	5,970	W	W	2	156	69	695	1,120	11,300
Nevada	654	7,320	W	W	1	300	451	4,400	1,870	15,700
New Hampshire	100	713	W	W	--	--	444	3,110	842	7,730
New Jersey	1,750	15,500	W	W	W	W	1,150	3,770	W	W
New Mexico	1,050	16,000	33	246	W	W	807	13,500	817	6,910
New York	2,790	41,300	230	3,980	W	W	541	6,400	1,660	13,000
North Carolina	W	W	--	--	W	W	127	864	4	36
North Dakota	107	1,350	22	158	--	--	W	W	1,450	10,800
Ohio	7,920	71,700	10	168	32	280	1,580	13,500	1,960	21,600
Oklahoma	1,370	13,900	60	733	5	50	209	1,240	131	1,150
Oregon	1,620	24,100	W	W	W	W	766	7,770	2,320	21,400
Pennsylvania	398	4,570	11	163	W	W	135	1,130	278	3,080
Rhode Island	W	W	--	--	--	--	210	2,780	171	1,980
South Carolina	14	172	44	466	--	--	W	W	W	W
South Dakota	525	3,020	W	W	--	--	W	W	1,950	9,620
Tennessee	406	4,190	--	--	W	W	W	W	W	W
Texas	11,800	123,000	649	7,910	--	--	221	3,010	959	9,940
Utah	1,020	11,700	(3)	5	6	66	163	3,720	2,090	15,200
Vermont	W	W	--	--	--	--	W	W	312	2,020
Virginia	1,120	14,000	W	W	16	200	411	5,730	W	W
Washington	4,740	42,200	(3)	1	23	658	1,380	8,800	1,870	24,700
West Virginia	--	--	--	--	--	--	--	--	--	--
Wisconsin	2,300	14,400	--	--	W	W	W	W	1,450	8,090
Wyoming	416	4,580	(3)	2	(3)	6	33	377	582	4,830
Total	100,000	1,070,000	2,750	34,400	354	4,370	27,200	307,000	55,300	434,000
Total withheld	8,570	82,900	398	5,230	1,110	14,200	2,000	26,100	192	2,100
Grand total	109,000	1,160,000	3,150	39,600	1,460	18,600	29,200	333,000	55,500	437,000

See footnotes at end of table.

TABLE 6—Continued
CONSTRUCTION SAND AND GRAVEL SOLD OR USED BY PRODUCERS IN 2018, BY STATE AND USE¹

(Thousand metric tons and thousand dollars)

State	Fill		Snow and ice control		Railroad ballast		Other uses ⁴		Total	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Alabama	248	974	W	W	--	--	11,000	97,500	14,800	137,000
Alaska	73	394	51	742	--	--	4,810	33,200	6,930	54,600
Arizona	W	W	(3)	6	7	100	34,600	349,000	47,600	477,000
Arkansas	88	467	W	W	--	--	6,480	62,800	7,120	68,300
California	3,500	42,200	16	182	W	W	66,500	816,000	106,000	1,360,000
Colorado	518	2,930	29	717	W	W	27,600	235,000	34,900	306,000
Connecticut	124	634	66	927	--	--	3,820	37,200	4,610	45,000
Delaware	1,210	4,660	--	--	--	--	1,330	15,000	2,680	21,000
Florida	3,190	37,400	--	--	--	--	14,800	149,000	21,000	228,000
Georgia	27	270	--	--	--	--	4,130	28,300	6,080	41,400
Hawaii	4	45	--	--	--	--	374	7,580	378	7,630
Idaho	443	1,330	31	372	W	W	13,300	81,300	18,400	118,000
Illinois	251	2,110	W	W	--	--	16,700	121,000	20,300	145,000
Indiana	324	2,950	31	173	--	--	W	W	17,300	142,000
Iowa	495	2,510	33	294	--	--	W	W	16,300	156,000
Kansas	116	639	8	59	W	W	6,280	35,500	8,510	60,100
Kentucky	99	553	--	--	--	--	8,360	37,800	8,800	40,500
Louisiana	242	1,290	--	--	2	58	W	W	12,700	137,000
Maine	163	677	104	675	W	W	W	W	8,060	61,700
Maryland	409	4,270	--	--	--	--	4,430	62,700	7,850	110,000
Massachusetts	527	3,750	54	1,590	--	--	W	W	9,020	86,400
Michigan	2,200	9,690	137	814	14	163	33,900	222,000	43,500	285,000
Minnesota	1,280	4,630	65	317	--	--	24,800	128,000	40,500	201,000
Mississippi	203	796	--	--	W	W	9,750	86,000	11,400	98,100
Missouri	19	119	W	W	--	--	6,400	51,400	10,500	85,200
Montana	135	922	W	W	W	W	8,200	63,600	10,800	88,000
Nebraska	232	1,480	18	143	--	--	W	W	10,200	79,400
Nevada	1,300	7,420	W	W	--	--	15,100	81,800	19,400	118,000
New Hampshire	240	1,130	60	487	W	W	5,350	43,200	7,060	56,900
New Jersey	65	480	6	72	--	--	10,700	97,100	13,800	118,000
New Mexico	W	W	1	9	--	--	5,520	49,500	8,880	92,700
New York	420	2,360	758	4,270	25	295	W	W	29,600	309,000
North Carolina	187	2,230	4	72	--	--	6,670	43,300	8,910	58,700
North Dakota	56	229	8	107	20	338	W	W	12,700	103,000
Ohio	1,130	10,600	13	83	--	--	18,500	161,000	31,100	279,000
Oklahoma	583	2,630	--	--	--	--	6,040	55,600	8,400	75,400
Oregon	86	472	W	W	11	133	11,600	118,000	16,400	173,000
Pennsylvania	W	W	115	893	--	--	6,820	72,800	7,990	83,800
Rhode Island	W	W	1	86	--	--	2,160	26,500	2,840	37,800
South Carolina	1,240	4,390	--	--	--	--	7,590	45,900	9,090	52,600
South Dakota	74	256	1	6	--	--	8,230	33,000	10,900	46,500
Tennessee	151	2,330	--	--	--	--	6,990	52,400	8,010	64,900
Texas	1,720	10,700	--	--	1	29	74,800	821,000	90,100	975,000
Utah	679	4,580	--	--	--	--	28,400	220,000	32,400	256,000
Vermont	102	353	92	599	7	42	4,390	32,000	5,260	37,700
Virginia	1,160	11,000	--	--	57	281	6,490	84,500	9,290	116,000
Washington	943	7,740	W	W	42	422	W	W	37,100	319,000
West Virginia	--	--	--	--	--	--	530	4,500	530	4,500
Wisconsin	262	1,010	84	997	--	--	21,800	150,000	26,300	186,000
Wyoming	109	536	(3)	6	--	--	8,700	84,900	9,840	95,200
Total	26,600	198,000	1,790	14,700	187	1,860	564,000	5,000,000	XX	XX
Total withheld	2,580	24,600	73	691	84	862	119,000	1,070,000	XX	XX
Grand total	29,200	223,000	1,860	15,400	271	2,720	683,000	6,070,000	912,000	8,300,000

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

¹Table includes data available through May 31, 2021. Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes road and other stabilization (cement and lime).

³Less than ½ unit.

⁴Includes reported and estimated production without a breakdown by end-use category.

TABLE 7
CONSTRUCTION SAND AND GRAVEL OPERATIONS IN THE UNITED STATES IN 2018, BY STATE¹

State	Active operations	Active pits	Dredging operations	Processing plants				Sales yards
				Stationary	Portable	Stationary and portable	None or unspecified	
Alabama	55	52	7	18	28	--	2	4
Alaska	74	79	2	32	33	5	2	1
Arizona	159	165	--	65	67	12	15	6
Arkansas	42	46	2	21	17	--	2	--
California	288	289	5	157	91	17	18	18
Colorado	232	299	--	76	118	6	32	4
Connecticut	54	59	2	19	27	4	2	--
Delaware	12	11	1	6	5	--	--	1
Florida	50	53	6	21	23	--	--	--
Georgia	32	31	6	16	9	--	1	1
Hawaii	8	9	--	2	5	--	1	--
Idaho	159	194	2	45	87	6	19	3
Illinois	95	96	16	44	25	3	7	2
Indiana	111	114	14	58	27	4	8	2
Iowa	135	150	14	32	72	5	12	2
Kansas	102	125	18	28	40	7	9	1
Kentucky	16	14	3	5	6	1	1	2
Louisiana	87	82	18	32	16	1	20	5
Maine	193	196	2	79	80	9	23	6
Maryland	33	35	2	18	8	1	4	2
Massachusetts	83	89	4	48	28	2	1	5
Michigan	334	367	14	137	146	13	24	8
Minnesota	412	552	9	195	170	18	20	5
Mississippi	49	49	5	21	23	--	--	1
Missouri	68	77	16	31	19	2	--	--
Montana	145	165	1	62	67	9	6	--
Nebraska	126	153	42	40	38	2	4	2
Nevada	83	140	--	27	49	4	3	1
New Hampshire	94	98	--	54	33	4	3	3
New Jersey	50	49	10	25	12	2	1	3
New Mexico	95	101	2	39	45	8	1	4
New York	349	373	17	134	159	22	17	5
North Carolina	63	61	7	26	22	4	4	3
North Dakota	153	171	--	51	85	3	14	2
Ohio	189	198	29	88	56	6	10	1
Oklahoma	56	59	10	8	34	3	1	1
Oregon	84	104	--	35	42	6	1	2
Pennsylvania	78	79	1	31	38	6	2	--
Rhode Island	22	32	1	8	9	4	--	--
South Carolina	37	50	6	11	14	1	5	3
South Dakota	134	191	3	47	68	5	11	2
Tennessee	27	27	2	6	18	1	--	1
Texas	246	243	8	145	83	4	6	15
Utah	157	172	3	62	81	11	--	1
Vermont	91	99	--	43	43	3	2	1
Virginia	87	85	3	22	55	2	5	9
Washington	174	191	7	87	59	12	9	2
West Virginia	2	2	2	--	--	--	--	--
Wisconsin	314	351	13	158	126	13	4	4
Wyoming	139	163	--	14	116	2	7	2
Total	5,878	6,590	335	2,429	2,522	253	339	146

-- Zero.

¹Table includes data available through May 31, 2021. Includes recycling plants.

TABLE 8
U.S. EXPORTS OF CONSTRUCTION SAND AND GRAVEL IN 2018, BY DESTINATION¹

(Metric tons and dollars)

Destination	Sand ²		Gravel ³	
	Quantity	Value ⁴	Quantity	Value ⁴
North America:				
Bahamas, The	2,100	365,000	170	87,900
Canada	1,960	461,000	6,700	4,310,000
Dominican Republic	1,140	344,000	120	38,900
Mexico	2,190	1,090,000	1,870	1,500,000
Other	2,630	976,000	641	617,000
Total	10,000	3,240,000	9,490	6,550,000
South America	9,600	2,363,618	136	94,400
Europe	4,990	2,150,000	670	696,000
Asia	43,100	7,810,000	219	233,000
Oceania	101	67,300	57	67,000
Africa	97	43,800	--	--
Grand total	68,000	15,700,000	10,600	7,640,000

-- Zero.

¹Table includes data available through May 31, 2021. 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 2505.90.0000.

³Includes HTS code 2517.10.0015.

⁴Free alongside ship value. Value of material at U.S. port of export; based on transaction price, including all charges incurred in placing material alongside ship.

Source: U.S. Census Bureau.

TABLE 9
U.S. IMPORTS FOR CONSUMPTION OF CONSTRUCTION SAND
AND GRAVEL, BY COUNTRY OR LOCALITY^{1,2}

Country or locality	2017			2018		
	Quantity (thousand metric tons)	Value ³ (thousands)	Unit value	Quantity (thousand metric tons)	Value ³ (thousands)	Unit value
Bahamas, The	22	\$706 ^r	\$31.62 ^r	49	\$1,810	\$36.59
Canada	6,210	54,100 ^r	8.72 ^r	5,490	49,700	9.05
China	32	2,840 ^r	89.56 ^r	16	3,990	253.39
Dominican Republic	--	--	--	4	874	201.83
Guyana	--	--	--	4	129	36.80
Haiti	--	--	--	4	709	194.77
Martinique	--	--	--	6	80	14.52
Mexico	188	4,120 ^r	21.92 ^r	225	4,490	19.96
Montserrat	--	--	--	9	221	24.51
New Zealand	8	2,210 ^r	274.31 ^r	11	2,870	265.58
Norway	33	4,080 ^r	124.59 ^r	22	2,590	117.86
Peru	7	1,950 ^r	292.09 ^r	7	1,690	255.49
South Africa	1	534	689.03	1	1,250	1010.00
Turkey	1	361	399.13	3	675	242.68
United Kingdom	5	670	132.60	1	533	576.48
Other	14 ^r	2,060 ^r	145.08 ^r	3	1,350	393.84
Total	6,520	73,700 ^r	11.31 ^r	5,860	73,000	12.46

^rRevised. -- Zero.

¹Table includes data available through May 31, 2021. Data are rounded to no more than three significant digits, except unit values; may not add to totals shown.

²Includes Harmonized Tariff Schedule of the United States (HTS) codes 2505.90.0000 and 2517.10.0015.

³Cost, insurance, and freight value. 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.

Source: U.S. Census Bureau.

TABLE 10
THE TOP 100 PRODUCERS OF CONSTRUCTION SAND AND GRAVEL IN THE UNITED STATES IN 2018¹

2018 rank	2017 rank ^f	Company	2018 rank	2017 rank ^f	Company
1	1	CRH Americas (Oldcastle Materials, Inc.)	51	47	Chaney Enterprises L.P.
2	2	Vulcan Materials Co.	52	80	Rasmussen Group, Inc.
3	4	Lehigh Hanson, Inc.	53	75	Capital Sand Co., Inc.
4	3	LafargeHolcim Ltd.	54	48	Burnco Rock Products Ltd
5	5	CEMEX S.A.B. de C.V.	55	55	Quikrete Co.
6	6	MDU Resources Group, Inc.	56	70	Irving Materials, Inc.
7	7	Martin Marietta Materials, Inc.	57	64	Troy Sand & Gravel Company, Inc.
8	8	Granite Construction Inc.	58	40	Strata Corp.
9	9	Teichert, Inc.	59	51	R.E. Janes Gravel Co.
10	11	CalPortland Co.	60	57	Central Specialties, Inc.
11	12	Summit Materials, LLC.	61	69	Grand Rapids Gravel Co.
12	10	Mitsubishi Cement Corp.	62	73	Dolese Bros. Co.
13	13	Clyde Cos., Inc.	63	60	Aggregate Resources, Inc.
14	14	Bureau of Land Management	64	58	Rieth-Riley Construction Co., Inc.
15	23	Pine Bluff Materials Co.	65	62	Johnson Sand & Gravel, Inc.
16	18	Fisher Industries	66	65	Capitol Aggregates Inc.
17	22	Gila River Indian Community	67	63	Nebco, Inc.
18	15	Arcosa Aggregates, Inc.	68	71	GS Materials, Inc.
19	26	Chandler Aggregates, Inc.	69	56	Wright Materials, Inc.
20	25	Wm. D. Scepaniak Construction	70	59	The Heritage Group
21	19	Miles Sand & Gravel Co.	71	67	Stewart Materials, LLC
22	21	Edw. C. Levy Co.	72	52	VantaCore Partners LP
23	17	L. G. Everist, Inc.	73	82	J. Lee Milligan, Inc.
24	29	Holliday Rock Co.	74	76	Hilltop Basic Resources, Inc.
25	16	Colas Inc.	75	77	National Lime & Stone Co.
26	27	Nugent Sand Co.	76	45	A & S Construction Co.
27	24	Mathy Construction Co.	77	88	Hi-Grade Materials Co.
28	20	Fordyce Ltd.	78	—	Ford Construction Co.
29	31	Salt River Pima-Maricopa Indian Community	79	100	Central-Allied Enterprises, Inc.
30	34	Multisources Ltd.	80	83	P & R Mining, Inc.
31	30	Dan Gernatt Gravel Products, Inc.	81	98	B.V. Hedrick Gravel & Sand Co.
32	32	Southwest Rock Products, LLC	82	—	Prowers Aggregate Operators, LLC
33	53	Eagle Materials Inc.	83	91	Pioneer Sand Co.
34	28	U.S. Concrete, Inc.	84	86	Construction Partners, Inc.
35	35	Watson Gravel, Inc.	85	—	Jaxon Enterprises
36	33	E.R. Jahna Industries, Inc.	86	74	Peak Sand & Gravel Inc.
37	84	North Texas Sand Farm, Inc.	87	72	Wissota Sand & Gravel
38	36	Thelen Sand & Gravel, Inc.	88	99	Atlanta Sand & Supply Co.
39	38	Polaris Materials Corp.	89	97	Coram Materials Corp.
40	39	FST Sand & Gravel, Inc.	90	—	State Ready Mix Inc.
41	46	York Building Products Co.	91	94	Lakeview Rock Products, Inc.
42	41	The Olen Corp.	92	95	Eucon Corp.
43	37	Las Vegas Paving Corp.	93	—	Ashley Land Development Co., Inc.
44	42	Clayton Sand Co.	94	79	Foley Materials Co.
45	61	Bowes Construction, Inc.	95	—	Alleyton Resource Co.
46	—	CAPA	96	90	S&S Aggregates, Inc.
47	54	TM Crushing, LLC	97	—	Halliday Sand & Gravel Inc.
48	50	Varra Cos., Inc.	98	78	Gateway Dredging & Contracting, LLC
49	43	Memphis Stone & Gravel Co.	99	—	O.L. Thompson Construction Co., Inc.
50	49	All American Asphalt Co.	100	—	McMurry Ready Mix Co.

^fRevised. — Not in the top 100 producers of construction sand and gravel in the United States in 2017.

¹Table includes data available through May 31, 2021. Listed in descending order of tonnage produced.

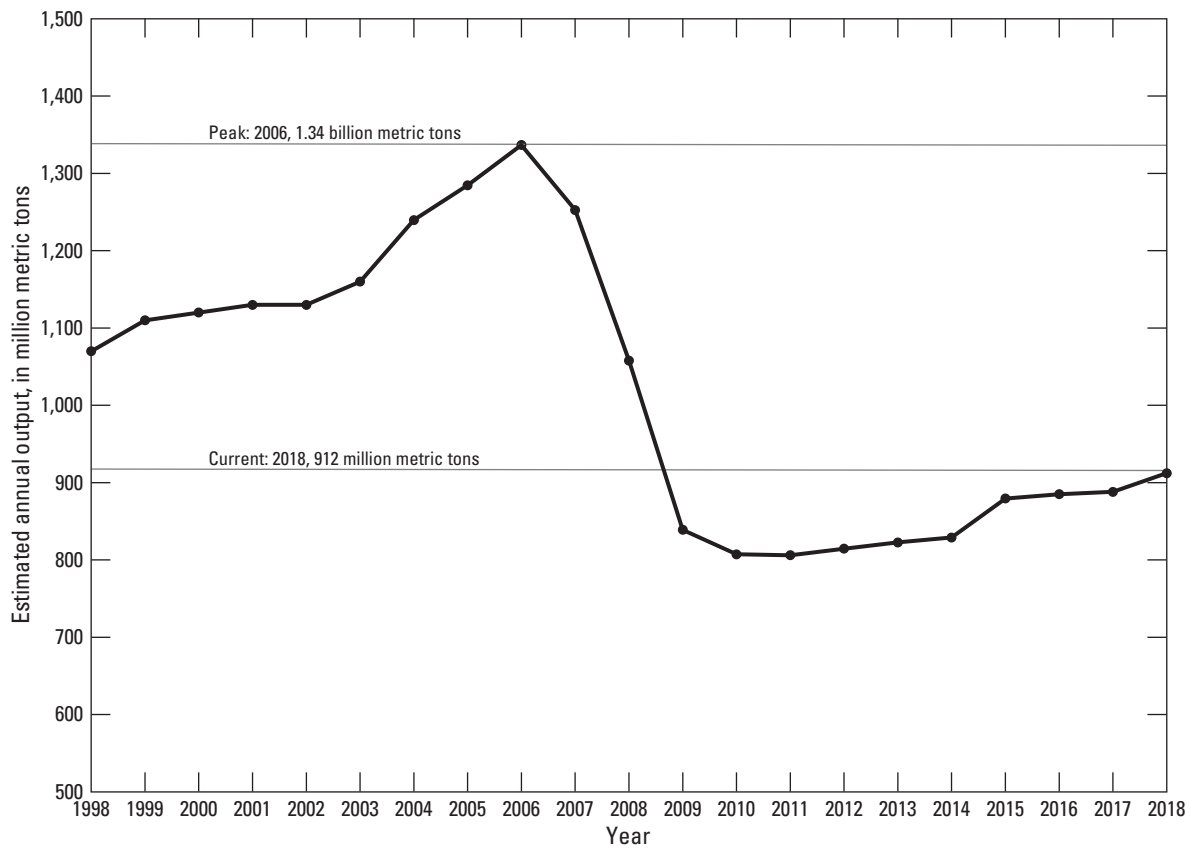


Figure 1. Annual output of construction sand and gravel produced for consumption in the United States from 1998 through 2018 (Source: Construction Sand and Gravel Statistics. Historical Statistics for Mineral and Material Commodities in the United States, Data Series 140).