

SAND AND GRAVEL (CONSTRUCTION)¹

(Data in million metric tons unless otherwise noted)

Domestic Production and Use: In 2018, 970 million tons of construction sand and gravel valued at \$8.7 billion was produced by an estimated 3,800 companies operating 9,350 pits and 340 sales and distribution yards in 50 States. Leading producing States were California, Texas, Arizona, Washington, Michigan, Minnesota, Colorado, Ohio, Wisconsin, and Utah, in order of decreasing tonnage, which together accounted for about 55% of total output. It is estimated that about 44% of construction sand and gravel was used as concrete aggregates; 24%, for road base and coverings and road stabilization; 12%, as asphaltic concrete aggregates and other bituminous mixtures; 12%, as construction fill; and 4%, for other miscellaneous uses. The remaining 4% was used for concrete products, filtration, golf course maintenance, plaster and gunite sands, railroad ballast, road stabilization, roofing granules, and snow and ice control.

The estimated output of construction sand and gravel in the United States shipped for consumption in the first 9 months of 2018 was 720 million tons, an increase of 7% compared with that of the same period of 2017. Third quarter shipments for consumption increased by 8% compared with those of the same period of 2017. Additional production information by quarter for each State, geographic region, and the United States is published by the U.S. Geological Survey (USGS) in its quarterly Mineral Industry Surveys for Crushed Stone and Sand and Gravel.

Salient Statistics—United States:	2014	2015	2016	2017^e	2018^e
Production	830	881	888	900	970
Imports for consumption	4	4	3	7	6
Exports	(²)	(²)	(²)	(²)	(²)
Consumption, apparent ³	833	885	892	910	980
Price, average value, dollars per metric ton	8.04	8.28	8.40	8.64	8.94
Employment, mine and mill, number ⁴	34,600	34,800	35,300	36,500	36,200
Net import reliance ⁵ as a percentage of apparent consumption	(²)	(²)	(²)	1	1

Import Sources (2014–17): Canada, 94%; Mexico, 3%; China, 1%; Norway, 1%; and other, 1%.

Tariff: Item	Number	Normal Trade Relations 12–31–18
Sand, other	2505.90.0000	Free.
Pebbles and gravel	2517.10.0015	Free.

Depletion Allowance: Common varieties, 5% (Domestic and foreign).

Government Stockpile: None.

SAND AND GRAVEL (CONSTRUCTION)

Events, Trends, and Issues: Construction sand and gravel production was about 970 million tons in 2018, an increase of 8% compared with that of 2017. Apparent consumption also increased by 7% to 980 million tons. Demand for construction sand and gravel increased in 2018 because of growth in the private and public construction markets, especially after this segment being flat during the past 2 years. Commercial and heavy-industrial construction activity, infrastructure funding, new single-family housing unit starts, and weather affect growth in sand and gravel production and consumption. Long-term increases in construction aggregates demand will be influenced by activity in the public and private construction sectors, as well as by construction work related to security measures being implemented around the Nation. The underlying factors that would support a rise in prices of construction sand and gravel are expected to be present in 2019, especially in and near metropolitan areas.

The construction sand and gravel industry remained concerned with environmental, health, permitting, safety, and zoning regulations. Movement of sand and gravel operations away from densely populated regions was expected to continue where regulations and local sentiment discouraged them. Resultant regional shortages of construction sand and gravel would likely result in higher-than-average price increases in industrialized and urban areas.

World Mine Production and Reserves:

	Mine production ^e		Reserves ⁶
	2017	2018	
United States	900	970	Reserves are controlled largely by land use and (or) environmental concerns.
Other countries ⁷	NA	NA	
World total	NA	NA	

World Resources: Sand and gravel resources are plentiful throughout the world. However, because of environmental regulations, geographic distribution, and quality requirements for some uses, sand and gravel extraction is uneconomic in some cases. The most important commercial sources of sand and gravel have been glacial deposits, river channels, and river flood plains. Use of offshore deposits in the United States is mostly restricted to beach erosion control and replenishment. Other countries routinely mine offshore deposits of aggregates for onshore construction projects.

Substitutes: Crushed stone, the other major construction aggregate, is often substituted for natural sand and gravel, especially in more densely populated areas of the Eastern United States. Crushed stone remains the dominant choice for construction aggregate use. Increasingly, recycled asphalt and portland cement concretes are being substituted for virgin aggregate, although the percentage of total aggregate supplied by recycled materials remained very small in 2018.

^eEstimated. NA Not available.

¹See also Sand and Gravel (Industrial) and Stone (Crushed).

²Less than ½ unit.

³Defined as production + imports – exports.

⁴Including office staff. Source: Mine Safety and Health Administration.

⁵Defined as imports – exports.

⁶See Appendix C for resource and reserve definitions and information concerning data sources.

⁷No reliable production information is available for most countries owing to the wide variety of ways in which countries report their sand and gravel production. Some countries do not report production for this mineral commodity. Production information for some countries is available in the USGS Minerals Yearbook, Volume III, Area Reports: International.