

SAND AND GRAVEL (CONSTRUCTION)¹(Data in million metric tons unless otherwise noted)²

Domestic Production and Use: Construction sand and gravel valued at \$5.9 billion was produced by an estimated 3,900 companies from about 6,000 operations in 50 States. Leading producing States, in order of decreasing tonnage, were Texas, California, Arizona, Colorado, Wisconsin, Michigan, Minnesota, New York, Nevada, and Ohio, which together accounted for about 50% of the total output. It is estimated that about 44% of construction sand and gravel was used as concrete aggregates; 23% for road base and coverings and road stabilization; 14% as construction fill; 12% as asphaltic concrete aggregates and other bituminous mixtures; 3% for plaster and gunite sands; 1% for concrete products, such as blocks, bricks, and pipes; and the remaining 3% for filtration, golf courses, railroad ballast, roofing granules, snow and ice control, and other miscellaneous uses.

The estimated output of construction sand and gravel in the 48 conterminous States, shipped for consumption in the first 9 months of 2010, was about 590 million tons, a decrease of 3% compared with the revised total for the same period in 2009. Information released by several of the leading sand and gravel producers for the third quarter of 2010 indicated improved sales and revenues compared with those of the third quarter of 2009. 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:	2006	2007	2008	2009	2010^e
Production	1,330	1,240	1,040	^e 780	760
Imports for consumption	5	4	5	3	2
Exports	1	(³)	(³)	1	1
Consumption, apparent	1,320	1,240	1,050	^e 780	760
Price, average value, dollars per ton	6.47	7.04	7.48	7.70	7.70
Employment, mines, mills, and shops, number	38,500	38,000	35,200	30,800	27,700
Net import reliance ⁴ as a percentage of apparent consumption	1	(³)	(³)	(³)	(³)

Recycling: Asphalt road surface layers, cement concrete surface layers, and concrete structures were recycled on an increasing basis.

Import Sources (2006–09): Canada, 75%; Mexico, 19%; The Bahamas, 4%; and other, 2%.

Tariff: Item	Number	Normal Trade Relations 12-31-10
Sand, silica and quartz, less than 95% silica	2505.10.5000	Free.
Sand, other	2505.90.0000	Free.
Pebbles and gravel	2517.10.0015	Free.

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

Government Stockpile: None.

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Events, Trends, and Issues: With U.S. economic activity remaining sluggish, construction sand and gravel output for 2010 stayed near the low levels experienced in 2009. The flat demand for construction sand and gravel reflected the struggling U.S. construction industry, with unemployment in many areas over 20% for construction workers. It is estimated that 2011 domestic production will begin to improve as the small but important increases seen in the second half of 2010 continue in 2011. A rapid recovery to recent highs is unlikely, however, as tax revenues that fund government construction projects continue to be depressed by lower home values. Additionally, demand for new housing is suppressed by the inability of unemployed and underemployed consumers to afford new homes.

Crushed stone, the other major construction aggregate, often substituted for natural sand and gravel, especially in more densely populated areas of the Eastern United States. The construction sand and gravel industry was concerned with environmental, health, permitting, safety, and zoning regulations. Movement of sand and gravel operations away from densely populated centers was expected to continue where environmental, land development, and local zoning regulations discouraged them. Consequently, shortages of construction sand and gravel would support higher-than-average price increases in industrialized and urban areas.

World Mine Production and Reserves:

	Mine production		Reserves ⁵
	2009	2010 ^e	
United States	^e 780	760	Reserves are controlled largely by land use and/or environmental concerns.
Other countries ⁶	NA	NA	
World total	NA	NA	

World Resources: Sand and gravel resources of the world are large. However, because of environmental restrictions, 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 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 2010.

^eEstimated. NA Not available.

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

²[See Appendix A for conversion to short tons.](#)

³Less than ½ unit.

⁴Defined as imports – exports.

⁵[See Appendix C for resource/reserve definitions and information concerning data sources.](#)

⁶No reliable production information for most countries is available 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 country chapters of the USGS Minerals Yearbook.