SAND AND GRAVEL (CONSTRUCTION)[1]

(Data in million metric tons unless otherwise noted)[2]

Domestic Production and Use: Construction sand and gravel valued at $8.0 billion was produced by an estimated 4,000 companies from about 6,300 operations in 50 States. Leading producing States, in order of decreasing tonnage, were California, Texas, Arizona, Colorado, Washington, Utah, Ohio, Wisconsin, Michigan, and Minnesota, which together accounted for about 50% of the total output. It is estimated that about 46% of construction sand and gravel was used as concrete aggregates; 22% for road base and coverings and road stabilization; 14% as construction fill; 12% as asphaltic concrete aggregates and other bituminous mixtures; 2% 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 2007, was about 852 million tons, a decrease of 15% compared with the revised total for the same period in 2006. 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:	**2003**	**2004**	**2005**	**2006**	**2007[e]**
Production	1,160	1,240	1,270	1,320	1,170
Imports for consumption	4	5	7	5	4
Exports	2	1	1	1	1
Consumption, apparent	1,160	1,240	1,280	1,320	1,180
Price, average value, dollars per ton	5.16	5.32	5.86	6.46	6.83
Employment, mines, mills, and shops, number	36,500	37,000	37,700	38,500	37,300
Net import reliance[3] as a percentage of apparent consumption	([4])	([4])	1	([4])	([4])

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

Import Sources (2003-06): Canada, 75%; Mexico, 18%; The Bahamas, 3%; and other, 4%.

Tariff: Item	**Number**	**Normal Trade Relations 12-31-07**
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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SAND AND GRAVEL (CONSTRUCTION)

Events, Trends, and Issues: In response to changes in demand from the struggling residential construction industry, construction sand and gravel output decreased for the first time since 1991. It is estimated that 2008 domestic production will decrease to about 1.12 billion tons as the housing market continues to be lackluster and revenues to governments are impacted by lower home values and associated revenues. Decreased revenues could curtail publicly funded construction projects, which in turn would lower demand for construction sand and gravel.

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

World Mine Production, Reserves, and Reserve Base:

	Mine production		Reserves and reserve base[5]
	2006	2007[e]	
United States	1,320	1,170	The reserves and reserve base 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 predominant 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 2007.

[e]Estimated. NA Not available.

[1]See also Sand and Gravel (Industrial).

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

[3]Defined as imports – exports + adjustments for Government and industry stock changes; changes in stocks are not available and assumed to be zero.

[4]Less than ½ unit.

[5]See Appendix C for definitions.

[6]No 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.