

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

Domestic Production and Use: Construction sand and gravel valued at \$6.3 billion was produced by an estimated 4,000 companies from about 6,500 operations in 50 States. Leading States, in order of decreasing tonnage, were California, Texas, Michigan, Arizona, Minnesota, Ohio, Colorado, Wisconsin, Washington, and Nevada, which together accounted for about 54% of the total output. It is estimated that about 52% of the 1.19 billion tons of construction sand and gravel produced in 2004 was for unspecified uses. Of the remaining total, about 44% was used as concrete aggregates; 22% for road base and coverings and road stabilization; 15% as construction fill; 13% as asphaltic concrete aggregates and other bituminous mixtures; 2% for concrete products, such as blocks, bricks, pipes, etc.; 2% for plaster and gunite sands; and the remaining 2% for snow and ice control, railroad ballast, roofing granules, filtration, 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 2004, was about 943 million tons, a 7.4% increase from the revised total for the same period of 2003. 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:	2000	2001	2002	2003	2004^e
Production	1,120	1,130	1,130	1,160	1,190
Imports for consumption	3	4	4	4	4
Exports	2	3	3	1	2
Consumption, apparent	1,120	1,130	1,130	1,160	1,190
Price, average value, dollars per ton	4.81	5.02	5.07	5.16	5.28
Stocks, yearend	NA	NA	NA	NA	NA
Employment, mines ₃ , mills, and shops, number	37,837	37,508	37,055	36,540	37,000
Net import reliance ³ as a percentage of apparent consumption	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)

Recycling: Asphalt road surfaces and cement concrete surfaces and structures were recycled on an increasing basis.

Import Sources (2000-03): Canada, 78%; Mexico, 13%; The Bahamas, 2%; and other, 7%.

Tariff: Item	Number	Normal Trade Relations
		12-31-04
Sand, construction	2505.90.0000	Free.
Gravel, construction	2517.10.0000	Free.

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

Government Stockpile: None.

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Events, Trends, and Issues: Construction sand and gravel output increased to approximately 1.19 billion tons, about 3% more than that of 2003. It is estimated that 2005 domestic production and U.S. apparent consumption will be about 1.2 billion tons each, a slight increase. Aggregate consumption is expected to continue to grow slowly in response to a growing economy and outlays for road and other construction. Most areas of the country will likely experience increased sales and consumption of sand and gravel. Crushed stone, the other major construction aggregate, has been replacing 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 safety, health, and environmental regulations. Movement of sand and gravel operations away from densely populated centers is expected to continue where local zoning, environmental, and land development regulations discourage sand and gravel operations. Consequently, shortages of construction sand and gravel in urban and industrialized areas also are expected to increase.

World Mine Production, Reserves, and Reserve Base:

	Mine production		Reserves and reserve base ⁵
	2003	2004 ^e	
United States	1,160	1,190	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 their geographic distribution, environmental restrictions, 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 river flood plains, river channels, and glacial deposits. 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 2004.

^eEstimated. NA Not available.

¹See also Sand and Gravel (Industrial).

²See Appendix A for conversion to short tons.

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

⁴Less than ½ unit.

⁵See Appendix C for definitions.

⁶No reliable production information for other countries is available, owing to the wide variation 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.