

## SAND AND GRAVEL (CONSTRUCTION)<sup>1</sup>

(Data in million metric tons, unless otherwise noted)<sup>2</sup>

**Domestic Production and Use:** Construction sand and gravel valued at \$4.3 billion was produced by 4,010 companies from 5,741 operations in 50 States. Leading States, in order of volume, were California, Texas, Michigan, Ohio, Arizona, Washington, Illinois, Colorado, Wisconsin, and Minnesota, which together accounted for about 52% of the total output. It is estimated that about 41% of the 963 million metric tons of construction sand and gravel produced in 1996 was for unspecified uses. Of the remaining total, about 42% was used as concrete aggregates; 25% for road base and coverings and road stabilization; 13% as asphaltic concrete aggregates and other bituminous mixtures; 13% as construction fill; 2% for concrete products such as blocks, bricks, pipes, etc.; 2% for plaster and gunite sands; and the remainder 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 1996 was about 661 million tons, which represents an increase of 2.6% compared with the same period of 1994. Additional production information by quarter for each State, geographic region, and the United States is published in the Quarterly Mineral Industry Surveys for Crushed Stone and Sand and Gravel.

<b>Salient Statistics—United States:</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996<sup>e</sup></b>
Production	834	<sup>g</sup> 869	891	910	963
Imports for consumption	1	1	1	1	1
Exports	1	1	1	1	1
Consumption, apparent	834	869	891	910	963
Price, average value, dollars per ton	4.01	4.06	4.20	4.29	4.43
Stocks, yearend	NA	NA	NA	NA	NA
Employment, quarry and mill <sup>e</sup> , number	41,600	42,000	42,500	42,500	42,500
Net import reliance <sup>3</sup> as a percent of apparent consumption	—	—	—	—	—

**Recycling:** Asphalt road surfaces and cement concrete surfaces and structures were recycled on a limited, but increasing, basis.

**Import Sources (1992-95):** Canada, 72%; Bahamas, 16%; Mexico, 3%; and other, 9%.

<b>Tariff: Item</b>	<b>Number</b>	<b>Most favored nation (MFN) 12/31/96</b>	<b>Non-MFN<sup>4</sup> 12/31/96</b>
Sand, construction	2505.90.0000	Free	Free.
Gravel, construction	2517.10.0000	Free	30% ad val.

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

**Government Stockpile:** None.

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**Events, Trends, and Issues:** Construction sand and gravel output increased 5.8% in 1996. It is estimated that 1997 domestic production and U.S. apparent consumption will be about 975 million tons each, a 1.2% increase.

The construction sand and gravel industry continued to be concerned with safety and health regulations and environmental restrictions. Shortages in urban and industrialized areas were expected to continue to increase because of local zoning regulations and land development. For these reasons, movement of sand and gravel operations away from highly populated centers is expected to continue.

**World Mine Production, Reserves, and Reserve Base:**

	<b>Mine production</b>		<b>Reserves and reserve base<sup>5</sup></b>
	<b><u>1995</u></b>	<b><u>1996<sup>e</sup></u></b>	
United States	910	963	The reserves and reserve base are controlled largely by land use and/or environmental constraints. Local shortages of sand or gravel are common.
Other countries	<u>NA</u>	<u>NA</u>	
World total	NA	NA	

**World Resources:** Sand and gravel resources of the world are large. However, due to their geographic distribution, environmental restrictions, and quality requirements for some uses, their extraction is sometimes uneconomic. The most important commercial sources of sand and gravel have been river flood plains, river channels, and glacial deposits. Marine deposits are being used presently in the United States, mostly for beach erosion control, and as a source of construction aggregates in other countries.

**Substitutes:** Crushed stone remains the predominant alternative for construction aggregate use.

<sup>e</sup>Estimated. NA Not available.

<sup>1</sup>See also Sand and Gravel (Industrial).

<sup>2</sup>See Appendix A for conversion to short tons.

<sup>3</sup>Defined as imports - exports + adjustments for Government and industry stock changes.

<sup>4</sup>See Appendix B.

<sup>5</sup>See Appendix C for definitions.