

**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 \$5.8 billion was produced by an estimated 4,000 companies from 6,400 operations in 50 States. Leading States, in order of decreasing tonnage, were California, Texas, Michigan, Arizona, Ohio, Minnesota, Washington, Wisconsin, Nevada, and Colorado, which together accounted for about 54% of the total output. It is estimated that about 53% of the 1.13 billion tons of construction sand and gravel produced in 2003 was for unspecified uses. Of the remaining total, about 42% was used as concrete aggregates; 23% for road base and coverings and road stabilization; 15% as construction fill; 12% as asphaltic concrete aggregates and other bituminous mixtures; 3% for concrete products, such as blocks, bricks, pipes, etc.; 1% for plaster and gunite sands; and the remaining 4% 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 2003 was about 851 million tons, a slight increase from the revised total for the same period of 2002. 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.

<b>Salient Statistics—United States:</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003<sup>e</sup></b>
Production	1,110	1,120	1,130	1,130	1,130
Imports for consumption	2	3	4	4	4
Exports	2	2	3	3	3
Consumption, apparent	1,110	1,120	1,130	1,130	1,130
Price, average value, dollars per ton	4.73	4.81	5.02	5.07	5.14
Stocks, yearend	NA	NA	NA	NA	NA
Employment, quarry and mill, number <sup>e</sup>	37,800	37,800	37,500	35,300	35,300
Net import reliance <sup>3</sup> as a percentage of apparent consumption	—	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )

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

**Import Sources (1998-2001):** Canada, 72%; Mexico, 18%; The Bahamas, 2%; and other, 8%.

<b>Tariff: Item</b>	<b>Number</b>	<b>Normal Trade Relations</b>
		<b>12/31/03</b>
Sand, construction	2505.90.0000	Free.
Gravel, construction	2517.10.0000	Free.

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

**Government Stockpile:** None.

## SAND AND GRAVEL (CONSTRUCTION)

**Events, Trends, and Issues:** Construction sand and gravel output remained at approximately 1.13 billion tons, about equal to that of 2002. It is estimated that 2004 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 the slowly growing economy and outlays for road and other construction. Although some areas of the country could experience increased sales and consumption of sand and gravel and other areas may have decreases, overall growth should be slightly positive.

The construction sand and gravel industry continues to be concerned with safety and health and environmental regulations. Movement of sand and gravel operations away from highly 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:**

	<b>Mine production</b>		<b>Reserves and reserve base<sup>5</sup></b>
	<u>2002</u>	<u>2003<sup>e</sup></u>	
United States	1,130	1,130	The reserves and reserve base are controlled largely by land use and/or environmental concerns.
Other countries <sup>6</sup>	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. Offshore deposits are being used presently in the United States, mostly for 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.

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

<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; changes in stocks not available and assumed to be zero.

<sup>4</sup>Less than ½ unit.

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

<sup>6</sup>No reliable production information for other countries is available, owing to a 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.