

**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 \$7.2 billion was produced by an estimated 3,900 companies from about 6,300 operations in 50 States. Leading producing States, in order of decreasing tonnage, were California, Texas, Arizona, Michigan, Minnesota, Ohio, Wisconsin, Nevada, Washington, and Colorado, which together accounted for about 54% of the total output. It is estimated that about 53% of the 1.26 billion tons of construction sand and gravel produced in 2005 was for unspecified uses. Of the remaining total, about 45% was used as concrete aggregates; 24% for road base and coverings and road stabilization; 13% as asphaltic concrete aggregates and other bituminous mixtures; 13% as construction fill; 2% for plaster and gunite sands; 1% for concrete products, such as blocks, bricks, and pipes; and the remaining 2% for filtration, 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 2005, was about 941 million tons, a slight increase from the revised total for the same period of 2004. 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>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005<sup>e</sup></b>
Production	1,130	1,130	1,160	1,240	1,260
Imports for consumption	4	4	4	5	5
Exports	3	3	1	1	1
Consumption, apparent	1,130	1,130	1,160	1,240	1,260
Price, average value, dollars per ton	5.02	5.07	5.16	5.33	5.70
Stocks, yearend	NA	NA	NA	NA	NA
Employment, mines, mills, and shops, number	37,500	37,100	36,500	37,000	36,900
Net import reliance <sup>3</sup> as a percentage of apparent consumption	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )

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

**Import Sources (2001-04):** Canada, 83%; Mexico, 10%; The Bahamas, 2%; and other, 5%.

<b>Tariff: Item</b>	<b>Number</b>	<b>Normal Trade Relations</b>
		<b>12-31-05</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 increased to approximately 1.26 billion tons, about 1.6% more than that of 2004. It is estimated that 2006 domestic production and U.S. apparent consumption will increase slightly to about 1.28 billion tons each. 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 <sup>5</sup>
	2004	2005 <sup>e</sup>	
United States	1,240	1,260	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. 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 2005.

<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; changes in stocks are 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 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.