

**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 \$7.9 billion was produced by an estimated 3,800 companies from about 6,000 operations in 50 States. Leading producing States, in order of decreasing tonnage, were California, Arizona, Texas, Michigan, Minnesota, Nevada, Ohio, Washington, Colorado, and Wisconsin, which together accounted for about 54% of the total output. It is estimated that about 49% of the 1.28 billion tons of construction sand and gravel produced in 2006 was for unspecified uses. Of the remaining total, about 45% 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 4% 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 2006, was about 963 million tons, an increase of 1.4% compared with the revised total for the same period in 2005. 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>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006<sup>e</sup></b>
Production	1,130	1,160	1,240	1,270	1,280
Imports for consumption	4	4	5	7	8
Exports	3	1	1	1	1
Consumption, apparent	1,130	1,160	1,240	1,280	1,290
Price, average value, dollars per ton	5.07	5.16	5.33	5.86	6.15
Stocks, yearend	NA	NA	NA	NA	NA
Employment, mines, mills, and shops, number	37,100	36,500	37,000	37,700	38,000
Net import reliance <sup>3</sup> as a percentage of apparent consumption	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	1	1

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

**Import Sources (2002-05):** Canada, 77%; Mexico, 17%; The Bahamas, 2%; and other, 4%.

<b>Tariff: Item</b>	<b>Number</b>	<b>Normal Trade Relations</b>
		<b>12-31-06</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 1.28 billion tons, a slight increase compared with that of 2005. It is estimated that 2007 domestic production will increase to 1.29 billion tons and U.S. apparent consumption will increase to about 1.3 billion tons. Aggregate consumption in 2006 is expected to grow more slowly than in 2005 in response to a declining housing market and limited growth in outlays for roads and highways. Substantial growth in nonresidential construction should help to offset decreases in home 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 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 in industrialized and urban areas also are expected to increase.

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

	Mine production		Reserves and reserve base <sup>5</sup>
	2005	2006 <sup>e</sup>	
United States	1,270	1,280	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 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 2006.

<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 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.