

# THE MINERAL INDUSTRY OF SOUTH CAROLINA

This chapter has been prepared under a Memorandum of Understanding between the U.S. Bureau of Mines, U.S. Department of the Interior, and the South Carolina Geological Survey for collecting information on all nonfuel minerals.

South Carolina ranked 30th in the Nation in total nonfuel mineral production value<sup>1</sup> in 1995, according to the U.S. Geological Survey (USGS). The State ranked 27th in 1994 (based on final data). The estimated value for 1995 was \$426 million, about a 2% decrease from that of 1994. This followed a 10.8% increase from 1993 to 1994. The State accounted for more than 1% of the U.S. total nonfuel mineral production value.

In 1995, decreases in portland cement, kaolin clay, and gold values were not completely offset by increases in crushed stone and construction and industrial sand and gravel. Other nonfuel mineral values that increased in 1995 included: masonry cement, crushed marble, dimension stone, silver, and gemstones. Decreases occurred in vermiculite and common clays. Nearly all commodities increased in value in 1994, led by portland cement which rose almost 31%, or \$34 million; gold had a moderate decrease in value.

Based on USGS estimates of the quantities produced in the 50 States in 1995, South Carolina remained the first of 2 States that produced vermiculite, ninth in gold, and one of the top 9 masonry cement-producing States. The State rose from fifth to fourth in crude mica and from eighth to

seventh in common clays, but it dropped from second to third in kaolin. Manganiferous ore was produced in South Carolina alone; the ore, a manganiferous schist, was used as a brick colorant and not in the production of manganese metal. Additionally, the State's mines and manufacturing plants produced significant quantities of crushed stone, portland cement, construction and industrial sand and gravel, and dimension stone. Primary aluminum and raw steel were produced in the State from raw materials that were acquired from other domestic and foreign sources. South Carolina ranked 11th of 14 States in the production of primary aluminum in 1995.

<sup>1</sup>The terms "nonfuel mineral production" and related "values" encompass variations in meaning, depending on the minerals or mineral products. Production may be measured by mine shipments, mineral commodity sales, or marketable production (including consumption by producers) as is applicable to the individual mineral commodity.

All 1995 USGS mineral production data are estimates, as of Dec. 1995. For some commodities, especially construction sand and gravel, crushed stone, and portland cement, estimates are updated periodically. To obtain the most current information, please contact the appropriate USGS mineral commodity specialist. Call MINES FaxBack at (703) 648-4999 from a fax machine with a touch-tone handset and request Document No. 1000 for a telephone listing of all mineral commodity specialists or call USGS information at (703) 648-4000 for the specialist's name and number.

TABLE 1  
NONFUEL RAW MINERAL PRODUCTION IN SOUTH CAROLINA<sup>1 2</sup>

Mineral	1993		1994		1995 <sup>p</sup>	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
Cement (portland) metric tons	2,130,000	\$109,000	2,210,000	\$143,000	1,960,000	\$127,000
Clays thousand metric tons	1,540	31,300	<sup>3</sup> 1,520	<sup>3</sup> 30,400	1,530	23,100
Sand and gravel:						
Construction do.	<sup>6</sup> 6,800	<sup>2</sup> 21,800	8,600	26,100	9,700	31,000
Industrial metric tons	749,000	19,000	699,000	18,100	812,000	19,600
Stone (crushed) thousand metric tons	19,800	121,000	<sup>4</sup> 20,000	<sup>4</sup> 128,000	<sup>4</sup> 1,400	<sup>4</sup> 140,000
Combined value of cement (masonry), clays [kaolin (1994)], gemstones, gold, manganiferous ore, mica (scrap), peat, silver, stone [crushed marble (1994-95), dimension (1993, 1995), dimension granite (1994)], and vermiculite	XX	88,700	XX	87,700	XX	85,100
Total	XX	391,000	XX	433,000	XX	426,000

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. XX Not applicable.

<sup>1</sup>Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

<sup>2</sup>Data are rounded to three significant digits; may not add to totals shown.

<sup>3</sup>Excludes certain clays; kind and value included with "Combined value" data.

<sup>4</sup>Excludes certain stones; kind and value included with "Combined value" data.

TABLE 2

**SOUTH CAROLINA: CRUSHED STONE<sup>1</sup> SOLD OR USED BY PRODUCERS IN 1994, BY USE<sup>2</sup>**

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Coarse aggregate (+1 1/2 inch): Macadam <sup>3</sup>	1,600	\$9,570	\$5.97
Coarse aggregate, graded:			
Concrete aggregate, coarse	2,100	14,500	6.89
Bituminous aggregate, coarse	2,490	17,000	6.85
Bituminous surface-treatment aggregate	W	W	6.55
Railroad ballast	W	W	7.65
Other graded coarse aggregate	W	W	1.10
Fine aggregate (-3/8 inch):			
Stone sand, concrete	W	W	5.67
Stone sand, bituminous mix or seal	W	W	6.64
Screening, undesignated	246	799	3.25
Other fine aggregate	W	W	9.45
Coarse and fine aggregates:			
Graded road base or subbase	W	W	5.30
Crusher run or fill or waste	W	W	5.43
Other coarse and fine aggregates	W	W	5.87
Other construction materials	4,580	27,100	5.93
Chemical and metallurgical: Cement manufacture	( <sup>4</sup> )	( <sup>4</sup> )	9.81
Unspecified: <sup>5</sup>			
Actual	( <sup>4</sup> )	( <sup>4</sup> )	5.75
Estimated	22	142	6.45
Total	20,000	128,000	6.39

W Withheld to avoid disclosing company proprietary data; included with "Other construction materials."

<sup>1</sup>Includes calcareous marl, dolomite, granite, limestone, and shell; excludes marble from State total to avoid disclosing company proprietary data.

<sup>2</sup>Data are rounded to three significant digits; may not add to totals shown.

<sup>3</sup>Includes riprap and jetty stone and other coarse aggregate.

<sup>4</sup>Withheld to avoid disclosing company proprietary data; included in "Total."

<sup>5</sup>Includes production reported without a breakdown by end use and estimates for nonrespondents.

TABLE 3

**SOUTH CAROLINA: CRUSHED STONE SOLD OR USED, BY KIND<sup>1</sup>**

Kind	1993				1994			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone	5	W	W	\$5.38	6	W	W	\$5.41
Dolomite	1	W	W	6.08	—	—	—	—
Calcareous marl	3	2,890	\$16,100	5.59	3	3,220	\$21,500	6.69
Shell	1	W	W	4.59	—	—	—	—
Granite	22	14,300	90,600	6.34	21	15,200	97,600	6.43
Marble	—	—	—	—	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Total	XX	19,800	121,000	6.12	XX	20,000	128,000	6.39

W Withheld to avoid disclosing company proprietary data; included in "Total." XX Not applicable.

<sup>1</sup>Data are rounded to three significant digits; may not add to totals shown.

<sup>2</sup>Excludes marble from State total to avoid disclosing company proprietary data.

TABLE 4  
**SOUTH CAROLINA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1994, BY MAJOR USE CATEGORY<sup>1</sup>**

Use	Quantity (thousand metric tons)	Value (thousands)	Value per ton
Concrete aggregate (including concrete sand)	4,240	\$15,200	\$3.60
Plaster and gunite sands	68	390	5.74
Concrete products (blocks, brick, pipe, decorative, etc.)	415	1,200	2.90
Asphaltic concrete aggregates and other bituminous mixtures	500	1,350	2.71
Road base and coverings <sup>2</sup>	210	634	3.01
Fill	931	1,760	1.89
Filtration	49	230	4.69
Other <sup>3</sup>	994	2,050	2.06
Unspecified: <sup>4</sup>			
Actual	523	1,420	2.71
Estimated	671	1,810	2.70
Total or average	8,600	26,100	3.04

<sup>1</sup>Data are rounded to three significant digits; may not add to totals shown.

<sup>2</sup>Includes road and other stabilization (cement) and snow and ice control.

<sup>3</sup>Includes railroad ballast.

<sup>4</sup>Includes production reported without a breakdown by end use and estimates for nonrespondents.

TABLE 5  
**SOUTH CAROLINA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1994, BY USE AND DISTRICT<sup>1</sup>**

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products <sup>2</sup>	255	983	1,730	5,970	2,740	9,890
Asphaltic concrete aggregates and road base materials <sup>3</sup>	260	939	443	786	938	2,030
Other miscellaneous uses <sup>4</sup>	77	298	—	—	966	1,980
Unspecified: <sup>5</sup>						
Actual	—	—	524	1,420	—	—
Estimated	2	7	132	376	537	1,430
Total	594	2,230	2,830	8,550	5,180	15,300

<sup>1</sup>Data are rounded to three significant digits; may not add to totals shown.

<sup>2</sup>Includes plaster and gunite sands.

<sup>3</sup>Includes fill, road and other stabilization (cement), and snow and ice control.

<sup>4</sup>Includes filtration and railroad ballast.

<sup>5</sup>Includes production reported without a breakdown by end use and estimates for nonrespondents.



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