

# THE MINERAL INDUSTRY OF SOUTH CAROLINA

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

In 1998, the preliminary estimated value<sup>1</sup> of nonfuel mineral production for South Carolina was \$589 million, according to the U.S. Geological Survey (USGS). This was about a 4% increase from that of 1997,<sup>2</sup> and followed a 15% increase in 1997 from that of 1996. The State ranked 25th in the Nation in 1998 (23d in 1997) in total nonfuel mineral production value, of which South Carolina accounted for nearly 1.5% of

the U.S. total.

Most of the State's nonfuel mineral commodities increased in value in 1998, led by a nearly 7% rise (\$14 million) in crushed stone and an almost 6% (\$11 million) increase in portland cement (table 1). Kaolin, crude mica, and silver decreased slightly, and gemstones and manganiferous ore were unchanged. Only gold, dropping by about 21%, showed any significant decrease. In 1997, most of the State's increase in value was accounted for by a \$56 million rise in the value of crushed stone, a combined increase of more than \$16 million in portland and masonry cements, and an \$11 million rise in kaolin (table 1).

Based on USGS estimates of the quantities produced in the 50 States in 1998, South Carolina remained the only<sup>2</sup> State to produce manganiferous ore, second in kaolin, fourth in masonry cement, fourth of 5 crude mica-producing States, and sixth in common clays. While the State continued as 10th of the 13 gold-producing States, it dropped from 1st to 2d of the 2 States that produce vermiculite. Additionally, significant quantities of crushed stone, portland cement, and industrial sand and gravel, in descending order of value, were produced in South Carolina. Primary aluminum and raw steel also were produced in the State, but from raw materials that were acquired from other domestic and foreign sources. South Carolina remained seventh of 14 States in the production of primary aluminum in 1998.

<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 1998 USGS mineral production data published in this chapter are preliminary estimates as of February 1999 and are expected to change. For some mineral commodities (for example, 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. A telephone listing for the specialists may be retrieved over the Internet at <http://minerals.usgs.gov/minerals/contacts/comdir.html>; by using MINES FaxBack at (703) 648-4999 from a fax machine with a touch-tone handset (request Document #1000 for a telephone listing of all mineral commodity specialists); or by calling USGS information at (703) 648-4000 for the specialist's name and number. All Mineral Industry Surveys—mineral commodity, State, and country—also may be retrieved over the Internet at <http://minerals.usgs.gov/minerals>; facsimile copies may be obtained from MINES FaxBack.

<sup>2</sup>Values, percentage calculations, and rankings for 1997 may vary from the *Minerals Yearbook, Area Reports: Domestic 1997, Volume II*, owing to the revision of preliminary 1997 to final 1997 data. Data for 1998 are preliminary and expected to change, while related rankings may also be subject to change.

TABLE 1  
NONFUEL RAW MINERAL PRODUCTION IN SOUTH CAROLINA 1/ 2/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1996		1997		1998 p/	
	Quantity	Value	Quantity	Value	Quantity	Value
<b>Cement:</b>						
Masonry	286	27.100 e/	334	35.500 e/	340	37.300
Portland	2,370	186.000 e/	2,520	194.000 e/	2,610	205.000
<b>Clays:</b>						
Common	1,260	4.860	1,080	2.850	1,100	2.910
Fire	24	W	--	--	--	--
Kaolin	387	18.100	447	29.000	468	28.400
<b>Gemstones</b>	NA	16	NA	1	NA	1
<b>Sand and gravel:</b>						
Construction	8,780	29.000	8,130	30.400	8,770	33.800
Industrial	761	19.500	770	19.300	775	19.400
<b>Stone: Crushed</b>	23,800	146.000	25,900	202.000	27,400	216.000
Combined values of gold, manganiferous ore (1997-98), mica (crude), silver, stone (dimension granite), vermiculite, and value indicated by symbol W	XX	62,700	XX	54,200	XX	45,600
<b>Total</b>	XX	493,000	XX	567,000	XX	589,000

e/ Estimated. p/ Preliminary. NA Not available. W Withheld to avoid disclosing company proprietary data; value included with "Combined values data. XX Not applicable.

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

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

TABLE 2  
SOUTH CAROLINA: CRUSHED STONE SOLD OR USED, BY KIND 1/

Kind	1996				1997			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone	8 r/	4,460 r/	\$22,800 r/	\$5.11 r/	10	4,490	\$34,800	\$7.74
Calcareous marl	2	W	W	W	2	W	W	W
Granite	23 r/	17,000 r/	114,000 r/	6.72 r/	25	19,000	157,000	8.27
Marble	1	W	W	W	1	W	W	W
Total	XX	23,800	146,000	6.15	XX	25,900	202,000	7.79

r/ Revised. W Withheld to avoid disclosing company proprietary data; included in "Total." XX Not applicable.  
1/ Data are rounded to three significant digits; may not add to totals shown.

TABLE 3  
SOUTH CAROLINA: CRUSHED STONE SOLD OR USED BY PRODUCERS  
IN 1997, BY USE 1/ 2/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
<b>Coarse aggregate (+1 1/2 inch):</b>			
Riprap and jettv stone	146	\$1,910	\$13.09
Filter stone	W	W	W
Coarse aggregate, graded 3/	2,160	17,600	8.15
Fine aggregate (-3/8 inch) 4/	884	6,560	7.42
<b>Coarse and fine aggregates</b>			
Crusher run or fill or waste	3,830	23,400	6.11
Other coarse and fine aggregates 5/	1,950	16,500	8.47
<b>Chemical and metallurgical: Cement manufacture</b>			
Unspecified: 6/	W	W	W
Actual	14,700	128,000	8.67
Estimated	349	1,930	5.52
Total	25,900	202,000	7.79

W Withheld to avoid disclosing company proprietary data; included in "Total."

1/ Includes calcareous marl, granite, limestone, and marble.

2/ Data are rounded to three significant digits, except unit value; may not add to totals shown.

3/ Includes bituminous aggregate (coarse), bituminous surface treatment aggregate, concrete aggregate (coarse), other graded coarse aggregate, and railroad ballast.

4/ Includes screening (undesignated), stone sand (bituminous mix or seal), and stone sand (concrete).

5/ Includes graded road base or subbase.

6/ Includes reported and estimated production without a breakdown by end use.

TABLE 4  
SOUTH CAROLINA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 1997,  
BY USE AND DISTRICT 1/

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
<b>Construction aggregates:</b>						
Coarse aggregate (+1 1/2 inch) 2/	229	2,590	--	--	W	W
Coarse aggregate, graded 3/	W	W	--	--	W	W
Fine aggregate (-3/8 inch) 4/	W	W	--	--	W	W
Coarse and fine aggregate 5/	W	W	--	--	W	W
Other construction materials	8,040	53,600	--	--	801	10,700
<b>Chemical and metallurgical 6/</b>						
Unspecified: 8/	--	--	--	--	(7/)	(7/)
Actual	2,440	19,700	7,520	61,600	(7/)	(7/)
Estimated	98	474	160	1,010	90	440
Total	10,800	76,400	7,680	62,600	7,420	62,800

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

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

2/ Includes filter stone and riprap and jetty stone.

3/ Includes bituminous aggregate (coarse), bituminous surface-treatment aggregate, concrete aggregate (coarse), and railroad ballast.

4/ Includes screening (undesignated), stone sand (bituminous mix or seal), and stone sand (concrete).

5/ Includes crusher run (select material or fill), graded road base or subbase, and other coarse and fine aggregates.

6/ Includes cement manufacture.

7/ Withheld to avoid disclosing company proprietary data; included in "Total."

8/ Includes reported and estimated production without a breakdown by end use.

TABLE 5  
SOUTH CAROLINA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1997,  
BY MAJOR USE CATEGORY 1/

Use	Quantity (thousand metric tons)	Value (thousands)	Value per ton
Concrete aggregate (including concrete sand)	3,430	\$12,300	\$3.59
Concrete products (blocks, bricks, pipe, decorative, etc.)	232	708	3.05
Asphaltic concrete aggregates and road base materials 2/	149	624	4.19
Fill	735	1,810	2.46
Snow and ice control	138	505	3.66
Other miscellaneous uses	6	12	2.00
Unspecified: 3/			
Actual	2,130	9,770	4.58
Estimated	1,300	4,670	3.58
Total or average	8,130	30,400	3.74

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

2/ Includes road and other stabilization (cement).

3/ Includes reported and estimated production without a breakdown by end use.

TABLE 6  
SOUTH CAROLINA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1997,  
BY USE AND DISTRICT 1/

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products 2/	242	1,190	1,370	4,530	2,050	7,310
Asphaltic concrete and road base materials 3/	W	W	W	W	60	239
Other miscellaneous uses 4/	244	1,010	236	395	488	1,310
Unspecified 5/	4	57	1,280	5,360	2,160	9,030
Total	490	2,250	2,890	10,300	4,750	17,900

W Withheld to avoid disclosing company proprietary data; included with "Other miscellaneous uses."

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

2/ Includes plaster and gunite sands.

3/ Includes road and other stabilization (cement).

4/ Includes fill and snow and ice control.

5/ Includes reported and estimated production without a breakdown by end use.