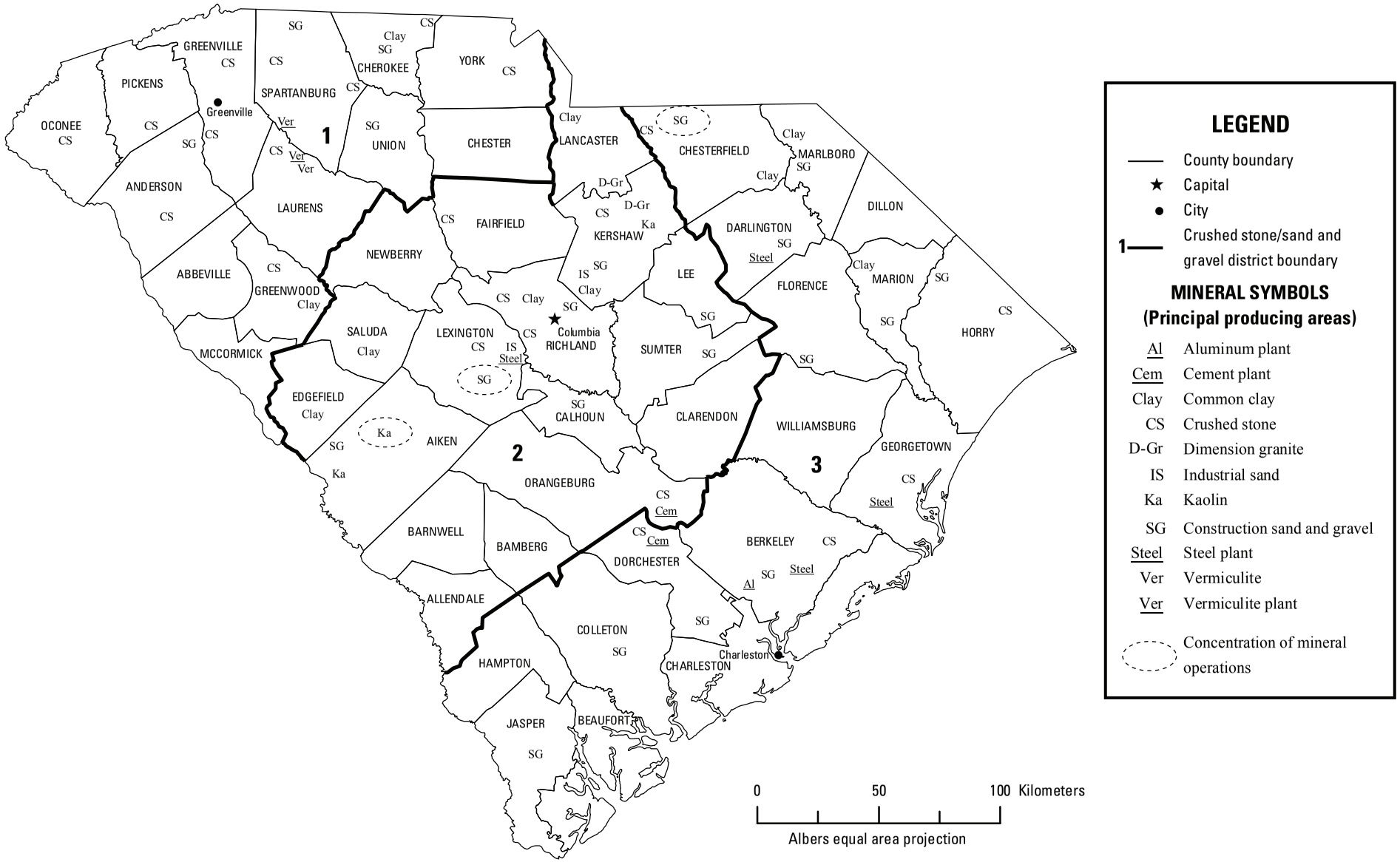
2010–2011 Minerals Yearbook

SOUTH CAROLINA [ADVANCE RELEASE]

U.S. Department of the Interior
U.S. Geological Survey

June 2015

SOUTH CAROLINA



Source: South Carolina Geological Survey/U.S. Geological Survey (2010–11).

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 2011, South Carolina's nonfuel mineral production[1] was valued at $483 million, based upon annual U.S. Geological Survey (USGS) data. This was a $15 million (3.2%) increase from the State's total nonfuel mineral production value of $468 million in 2010, which followed a $19 million (4.2%) increase from $449 million in 2009. The totals exclude the value of dimension stone (except in 2009) and vermiculite to conceal proprietary company data. South Carolina ranked 33d in total nonfuel mineral production value among the 50 States in 2011, up slightly from 34th in 2010 and 35th in 2009, and accounted for less than 1% of the total U.S. value in each year. On a per capita basis, the State ranked 33d in the Nation in nonfuel mineral production in 2011 with a value of $103 per capita, below the national average of $240.

In terms of value, crushed stone and portland cement once again led the nonfuel mineral industry in South Carolina during 2010 and 2011. Crushed stone accounted for 41% of the State's publishable nonfuel mineral production value, slightly more than portland cement. Crushed stone and portland cement have been the leading nonfuel minerals in South Carolina for at least three decades, during which they have exchanged places as the leading commodity on multiple occasions. After declining from approximately 65% in 1987 to 51% in 1992, the percentage of South Carolina's publishable nonfuel mineral production value represented by these two commodities gradually rose to a high of 84% in 2010. Other significant nonfuel minerals produced in the State, by descending order of production value in 2011, include construction sand and gravel, kaolin, masonry cement, and industrial sand and gravel.

Following 2 years of decline, the production quantities and production values of crushed stone and portland cement increased in 2010. The production quantity and production value of portland cement also increased in 2011, whereas crushed stone saw a gain in production quantity but a decrease in production value. This decrease was more than offset by an 11% increase in the production value of portland cement, almost enough to boost it to the number one rank by value in the State. In total, portland cement production climbed 33% from nearly 1.9 million metric tons (Mt) in 2009 to 2.5 Mt in 2011, and the production value jumped 17% from $169 million to $197 million. An additional 1.2 Mt of crushed stone was produced in 2011 relative to 2009, an increase of 7%, but production value was slightly lower than that in 2009. Among other nonfuel minerals, the production values of common clay, construction sand and gravel, masonry cement, and vermiculite ended 2011 lower than in 2009, while those of kaolin and industrial sand and gravel increased during 2009–11. The uptick in kaolin production was particularly notable; the value increased to $19.7 million in 2011 from $8.6 million in 2009 (nearly 130%). It increased in rank to fourth place by value inside the State in 2011 compared to sixth in 2010. The largest decrease took place with masonry cement, with the value decreasing by $3.7 million (17%) compared to 2009.

South Carolina continued to be the top producer of vermiculite out of two States during 2010 and 2011; production increased in 2010 and 2011. The State remained second by quantity in kaolin production (out of 8 States in 2011 and 14 States in 2010) and sixth out of 25 States in the production of masonry cement, accounting for 8% of the U.S. total in 2011. Among the 35 States that produced portland cement, South Carolina rose in rank to 8th in 2011 from 10th place in 2009 and 2010.

[1]The terms "nonfuel mineral production" and related "values" encompass variations in meaning, depending upon the 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 USGS mineral production data published in this chapter are those available as of May 2013. Data in this report are rounded to three significant digits and percentages are calculated from unrounded data. All USGS Mineral Industry Surveys and USGS Minerals Yearbook chapters—mineral commodity, State, and country—can be retrieved over the Internet at http://minerals.usgs.gov/minerals.

TABLE 1

NONFUEL RAW MINERAL PRODUCTION IN SOUTH CAROLINA[1, 2]

(Thousand metric tons and thousand dollars)

Mineral	2009		2010		2011	
	Quantity	Value	Quantity	Value	Quantity	Value
Cement:						
Masonry	174	22,000 e	152	18,300 e	143	18,300 e
Portland	1,870	169,000 e	2,050	178,000 e	2,480	197,000 e
Clays:						
Common	311	1,300	267	1,190	227	1,250
Fire	--	--	--	--	--	--
Kaolin	144	8,590	158	10,500	246	19,700
Gemstones, natural	NA	1	NA	1	NA	1
Mica, crude	--	--	--	--	--	--
Sand and gravel:						
Construction	5,900	32,900	7,100	30,200	7,070	31,400
Industrial	441	14,000	530	14,700	451	16,700
Stone:						
Crushed	18,200	201,000	19,200	215,000	19,500	199,000
Dimension	3	401	W	W	W	W
Vermiculite	W	W	W	W	W	W
Total	XX	449,000	XX	468,000	XX	483,000

[e]Estimated. NA Not available. W Withheld to avoid disclosing company proprietary data; excluded from "Total." XX Not applicable.

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

[2]Data are rounded to no more than three significant digits; may not add to totals shown.

TABLE 2

SOUTH CAROLINA: CRUSHED STONE SOLD OR USED IN THE UNITED STATES, BY TYPE[1]

Type	2009				2010				2011			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone[2]	5	2,110 r	$21,700 r	$10.28	5	2,530	$24,900	$9.85	7	4,680	$31,000	$6.62
Marble	--	--	--	--	1	486	6,030	12.40	--	--	--	--
Calcareous marl	3	2,580 r	14,500 r	5.62	3	2,720	21,400	7.89	2	1,320	7,420	5.62
Granite	23	13,100	159,000	12.14	23	13,400	163,000	12.12	24	12,700	153,000	11.98
Miscellaneous stone	1	418	5,520	13.20	-- r	-- r	-- r	-- r	2	707	8,220	11.63
Total or average	XX	18,200	201,000	11.04	XX	19,200	215,000	11.23	XX	19,500	199,000	10.25

[r]Revised. XX Not applicable. -- Zero.

[1]Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

[2]Includes limestone-dolomite reported with no distinction between the two kinds of stone.

TABLE 3
SOUTH CAROLINA: CRUSHED STONE SOLD OR USED BY PRODUCERS
IN 2010, BY USE[1]

(Thousand metric tons and thousand dollars)

Use	Quantity	Value
Construction:		
Coarse aggregate (+1½ inch):		
Riprap and jetty stone	112	1,280
Other coarse aggregate	W	W
Coarse aggregate, graded:		
Concrete aggregate, coarse	400	3,990
Bituminous aggregate, coarse	477	4,760
Railroad ballast	W	W
Other graded coarse aggregate	3,400	55,200
Fine aggregate (-⅜ inch):		
Stone sand, concrete	14	136
Stone sand, bituminous mix or seal	257	2,560
Screening, undesignated	249	1,540
Other fine aggregate	1,340	13,800
Coarse and fine aggregates:		
Graded road base or subbase	1,160	11,600
Crusher run or fill or waste	346	2,680
Other coarse and fine aggregates	1,960	22,400
Chemical and metallurgical, cement manufacture	1,330	7,470
Other miscellaneous uses and specified uses not listed	56	561
Unspecified:[2]		
Reported	6,500	68,800
Estimated	1,390	14,000
Total	19,200	215,000

W Withheld to avoid disclosing company proprietary data; included in "Total."
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Reported and estimated production without a breakdown by end use.

TABLE 4
SOUTH CAROLINA: CRUSHED STONE SOLD OR USED BY PRODUCERS
IN 2011, BY USE[1]

(Thousand metric tons and thousand dollars)

Use	Quantity	Value
Construction:		
Coarse aggregate (+1½ inch):		
Macadam	W	W
Riprap and jetty stone	65	513
Filter stone	W	W
Unspecified coarse aggregate	W	W
Coarse aggregate, graded:		
Concrete aggregate, coarse	W	W
Bituminous aggregate, coarse	309	3,100
Bituminous surface-treatment aggregate	1	17
Railroad ballast	W	W
Unspecified graded coarse aggregate	W	W
Fine aggregate (-⅜ inch):		
Stone sand, bituminous mix or seal	154	1,550
Screening, undesignated	91	433
Unspecified fine aggregate	1,270	12,600
Coarse and fine aggregates:		
Graded road base or subbase	467	4,120
Crusher run or fill or waste	458	3,750
Unspecified coarse and fine aggregates	W	W
Unspecified and other construction materials	15	198
Chemical and metallurgical, cement manufacture	3,450	13,000
Unspecified:[2]		
Reported	7,340	76,500
Estimated	437	4,670
Total	19,500	199,000

W Withheld to avoid disclosing company proprietary data; included in "Total."
[1]Data are rounded to no more than three significant digits.
[2]Reported and estimated production without a breakdown by end use.

TABLE 5
SOUTH CAROLINA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2010, BY USE AND DISTRICT[1]

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1½ inch)[2]	178	3,670	W	W	W	W
Coarse aggregate, graded[3]	W	W	W	W	W	W
Fine aggregate (-⅜ inch)[4]	W	W	W	W	336	3,850
Coarse and fine aggregates[5]	W	W	W	W	1,120	11,700
Other construction materials	--	--	--	--	56	561
Chemical and metallurgical[6]	--	--	--	--	1,330	7,470
Unspecified:[7]						
Reported	1,940	21,700	1,060	10,700	3,500	36,400
Estimated	--	--	1,390	14,000	--	--
Total[8]	6,500	77,900	5,330	60,000	7,340	77,300

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.
[1]Data are rounded to no more than three significant digits.
[2]Includes macadam, riprap and jetty stone, filter stone, and other coarse aggregates.
[3]Includes concrete aggregate (coarse), bituminous aggregate (coarse), bituminous surface-treatment aggregate, railroad ballast, and other graded coarse aggregates.
[4]Includes stone sand (concrete), stone sand (bituminous mix or seal), screening (undesignated), and other fine aggregates.
[5]Includes graded road base or subbase, unpaved road surface, terrazzo and exposed aggregate, crusher run, roofing granules, and other coarse and fine aggregates.
[6]Includes cement manufacture, lime manufacture, dead-burned dolomite manufacture, flux stone, chemical stone, glass manufacture, and sulfur oxide removal.
[7]Reported and estimated production without a breakdown by end use.
[8]District totals may not add up to the published State total, owing to revisions made after the production of the table and (or) proprietary data being withheld.

TABLE 6
SOUTH CAROLINA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2011, BY USE AND DISTRICT[1]

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1½ inch)[2]	146	1,880	W	W	W	W
Coarse aggregate, graded[3]	W	W	W	W	W	W
Fine aggregate (-⅜ inch)[4]	W	W	W	W	W	W
Coarse and fine aggregates[5]	W	W	W	W	1,060	11,100
Other construction materials	--	--	--	--	15	198
Chemical and metallurgical[6]	--	--	W	W	1,320	7,420
Unspecified:[7]						
Reported	2,090	22,200	1,960	20,100	3,290	34,200
Estimated	--	--	67	717	370	3,950
Total	6,120	70,400	6,010	51,400	7,330	77,600

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.
[1]Data are rounded to no more than three significant digits.
[2]Includes macadam, riprap and jetty stone, filter stone, and other coarse aggregates.
[3]Includes concrete aggregate (coarse), bituminous aggregate (coarse), bituminous surface-treatment aggregate, railroad ballast, and other graded coarse aggregates.
[4]Includes stone sand (concrete), stone sand (bituminous mix or seal), screening (undesignated), and other fine aggregates.
[5]Includes graded road base or subbase, unpaved road surface, terrazzo and exposed aggregate, crusher run, roofing granules, and other coarse and fine aggregates.
[6]Includes cement manufacture, lime manufacture, dead-burned dolomite manufacture, flux stone, chemical stone, glass manufacture, and sulfur oxide removal.
[7]Reported and estimated production without a breakdown by end use.

TABLE 7
SOUTH CAROLINA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2010,
BY MAJOR USE CATEGORY[1]

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate and concrete products[2]	2,800	$13,400	$4.79
Asphaltic concrete aggregates and road base materials[3]	339	1,660	4.90
Fill	1,580	2,810	1.78
Other miscellaneous uses[4]	77	949	12.32
Unspecified:[5]			
Reported	1,060	5,760	5.43
Estimated	1,250	5,660	4.53
Total or average	7,100	30,200	4.25

[1]Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.
[2]Includes plaster and gunite sands.
[3]Includes road and other stabilization (cement).
[4]Includes filtration and golf course.
[5]Reported and estimated production without a breakdown by end use.

TABLE 8
SOUTH CAROLINA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2011,
BY MAJOR USE CATEGORY[1]

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate (including concrete sand)	2,550	$12,200	$4.78
Concrete products (blocks, bricks, pipe, decorative, etc.)	83	663	7.99
Asphaltic concrete aggregates and road base materials[2]	517	2,570	4.97
Fill	1,460	2,730	1.87
Other miscellaneous uses[3]	43	920	21.40
Unspecified:[4]			
Reported	1,300	7,250	5.58
Estimated	1,120	5,060	4.52
Total or average	7,070	31,400	4.44

[1]Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.
[2]Includes road and other stabilization (cement).
[3]Includes filtration and golf course.
[4]Reported and estimated production without a breakdown by end use.

TABLE 9
SOUTH CAROLINA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2010,
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]	W	W	1,980	8,300	798	4,870
Asphaltic concrete aggregates and road base materials[3]	W	W	66	283	232	1,110
Fill	--	--	145	328	1,440	2,480
Other miscellaneous uses[4]	--	--	15	78	62	871
Unspecified:[5]						
Reported	--	--	177	933	879	4,830
Estimated	222	1,030	191	859	835	3,770
Total[6]	285	1,490	2,570	10,800	4,240	17,900

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Includes plaster and gunite sands.
[3]Includes road and other stabilization (cement).
[4]Includes filtration and golf course.
[5]Reported and estimated production without a breakdown by end use.
[6]District totals may not add up to the published State total owing to revisions made after the production of the table and/or proprietary data being

TABLE 10
SOUTH CAROLINA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2011,
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	W	W	W	W	1,170	6,180
Asphaltic concrete aggregates and road base materials[2]	W	W	W	W	437	2,130
Fill	--	--	108	240	1,350	2,490
Other miscellaneous uses[3]	--	--	--	--	43	920
Unspecified:[4]						
Reported	5	21	483	2,780	817	4,450
Estimated	60	270	329	1,540	728	3,250
Total	153	902	2,380	11,100	4,540	19,400

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.
[1]Data are rounded to no more than three significant digits.
[2]Includes road and other stabilization (cement).
[3]Includes filtration, and golf course.
[4]Reported and estimated production without a breakdown by end use.