

THE MINERAL INDUSTRY OF GEORGIA

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

Georgia increased in rank from fifth to fourth nationally in total nonfuel mineral production value¹ in 1997, according to the U.S. Geological Survey (USGS). The estimated value in 1997 was \$1.77 billion, a 2% increase from that of 1996. This followed about a 3% increase from 1995 to 1996 (based on final 1996 data). The State accounted for 4.5% of the U.S. total nonfuel mineral production value.

Georgia was by far the leading clay-producing State in the Nation, accounting for nearly 24% of U.S. total clay production. Kaolin remained Georgia's foremost nonfuel mineral commodity in 1997, accounting for 59% of the State's estimated total nonfuel mineral value and of that about 92% of its clay value. Whereas kaolin production was down 4% for the year, its value remained the same.

In 1997, nearly all other nonfuel mineral commodities increased in value, led by a \$24 million, or 6%, increase in the value of crushed stone. Crushed stone accounted for 24% of the State's nonfuel mineral production value. While portland cement increased by 4% in value, fuller's earth dropped off by about the same. In the previous year, 1996, the most significant increases in final values occurred in crushed stone and portland cement; these were somewhat moderated by a decrease in kaolin. (See table 1).

Based on USGS estimates of the quantities produced in the United States during 1997, Georgia remained first among the 50 States in kaolin and fuller's earth, second in barite, third in iron oxide pigments, fourth in dimension stone and feldspar, fifth in common clays, and eighth in masonry cement. While Georgia rose from fifth to third in crude mica, the State dropped from sixth to eighth in crushed stone.

The following narrative information was provided by the Georgia Geologic Survey,² in cooperation with representatives of the Georgia Crushed Stone Association (GCSA) and the Elberton

Granite Association. The GCSA includes all major producers in Georgia.

The GCSA reported that their quarries shipped an estimated 62.1 million metric tons of crushed stone in 1997. This represented a 5% increase in production from that of 1996. Thus, in spite of some previous predictions, there was no drop-off following the 1996 Olympics in Atlanta. According to the GCSA, future prospects in the crushed stone industry ranged from little change to continued growth in 1998. This was dependent upon several factors, especially the level of funding for highway construction in the next Federal Budget. The counties in the Atlanta metropolitan area have had continued air quality problems—particularly for exceeding ozone limits. If these problems are not properly addressed, the result could be severe reductions in Federal highway funding in the near future. Additionally, new national standards to increase the proportion of coarse stone in asphalt mix are planned in July 1998. This would effectively increase Georgia's crushed stone internal demand by about 20%, which could cause the crushed stone industry in Georgia to have difficulty in meeting future demand for crushed stone.

Georgia's dimension granite industry includes operations in Elbert, Oglethorpe, Madison, Greene, and Wilkes Counties; however, most quarries and plants are in Elbert County. During 1997, there were 45 active quarries producing more than 57,000 cubic meters of monumental-grade granite. The industry employs approximately 2,100 individuals with a quarry workforce of 323 production workers. In 1996-97, the total industry payroll was \$52 million while the quarry payroll was \$6.7 million. Local sales of granite remained strong in 1997; however, sales to Pacific Rim markets continued to decline. On the other hand, there is growing interest from some European buyers, but the volume is not significant.

In June 1997, the Rock of Ages Corp. of Barre, VT, announced its merger with Keystone Memorials Co. of Elberton and the purchase of two other Elberton firms—Childs & Childs Granite Co., Inc. and Southern Mausoleums, Inc. This transaction involved quarries in Georgia, North Carolina, South Carolina, Oklahoma, and Pennsylvania.

In order to address the continuing shortage of semiskilled and skilled labor, the dimension granite industry planned to initiate a pilot program with area social service departments in 1998 to train women in various plant production jobs. In addition, the industry is sponsoring a training program that will reimburse employers for a portion of the wages of employees enrolled in stone-cutting apprentice positions.

¹The 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 1997 USGS mineral production data published in this chapter are estimates as of January 1998. For some 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. Call MINES FaxBack at (703) 648-4999 from a fax machine with a touch-tone handset and request Document # 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. This telephone listing may also be retrieved over the Internet at <http://minerals.er.usgs.gov/minerals/contacts/comdir.html/>.

²Bruce J. O'Connor, Supervisory Geologist, authored the text of mineral industry information submitted by the Georgia Geologic Survey.

TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN GEORGIA 1/ 2/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1995		1996		1997 p/	
	Quantity	Value	Quantity	Value	Quantity	Value
Clays:						
Common	1,660	11,200	1,660	11,200	1,890	11,600
Fuller's earth	744	90,100	739	89,200	739	85,000
Kaolin	8,240	1,060,000	8,040	1,050,000	7,690	1,050,000
Gemstones	NA	51	NA	32	NA	594
Sand and gravel:						
Construction	5,780	23,100	6,520	24,500	6,370	24,500
Industrial	574	7,060	313	5,650	314	6,230
Stone:						
Crushed	60,600	373,000	63,400 3/	401,000 3/	65,000 3/	425,000 3/
Dimension metric tons	132,000	27,700	89,600 3/	10,300 3/	90,100 3/	10,400 3/
Combined value of barite, bauxite (1995), cement, feldspar, iron oxide pigments (crude), mica (crude), and stone [crushed marble (1996-97), dimension marble (1996-97)], and talc and pyrophyllite (1997)	XX	102,000	XX	148,000	XX	154,000
Total	XX	1,690,000	XX	1,740,000	XX	1,770,000

p/ Preliminary. NA Not available. 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.

3/ Excludes certain stones; kind and value included with "Combined value" data.

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

Kind	1995				1996			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone 2/	17 r/	8,330 r/	\$50,200 r/	\$6.02 r/	20	10,100	\$65,600	\$6.48
Marble	7	W	W	7.54 r/	(3/)	(3/)	(3/)	(3/)
Granite	51	51,300	315,000	6.14 r/	51	53,300	336,000	6.31
Quartzite	1	W	W	7.17 r/	--	--	--	--
Total	XX	60,600	373,000	6.14	XX	63,400	401,000	6.33

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.

2/ Includes "Limestone-dolomite," reported with no distinction between the two.

3/ Excludes marble from State total to avoid disclosing company proprietary data.

TABLE 3
 GEORGIA: CRUSHED STONE SOLD OR USED BY PRODUCERS
 IN 1996, BY USE 1/ 2/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Coarse aggregate (+1 1/2 inch):			
Macadam	W	W	\$8.49
Riprap and jetty stone	471	\$4,770	10.12
Filter stone	534	4,250	7.96
Coarse aggregate, graded:			
Concrete aggregate, coarse	5,310	33,600	6.32
Bituminous aggregate, coarse	3,310	24,400	7.37
Other graded coarse aggregate 3/	4,420	32,500	7.36
Fine aggregate (-3/8 inch):			
Stone sand, concrete	1,880	11,700	6.22
Stone sand, bituminous mix or seal	3,630	19,300	5.32
Screening, undesignated	512	2,940	5.74
Other fine aggregate	W	W	3.73
Coarse and fine aggregates:			
Graded road base or subbase	3,440	18,100	5.28
Unpaved road surfacing	118	664	5.63
Terrazzo and exposed aggregate	W	W	6.43
Crusher run or fill or waste	6,250	35,200	5.63
Other construction materials 4/	463	2,860	6.17
Agricultural limestone:	13	92	7.08
Chemical and metallurgical; cement manufacture	(5/)	(5/)	5.17
Special; whitening or whitening substitute	(5/)	(5/)	11.00
Unspecified: 6/			
Actual	29,100	186,000	6.40
Estimated	1,790	11,400	6.40
Total	63,400	401,000	6.33

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

1/ Includes, granite, limestone, limestone-dolomite, and quartzite; excludes marble from State total to avoid disclosing company proprietary data.

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

3/ Includes bituminous aggregate (coarse) and railroad ballast.

4/ Includes drain fields.

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

6/ Includes production reported without a breakdown by end use and estimates for nonrespondents.

TABLE 4
 GEORGIA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 1996, BY USE AND DISTRICT 1/ 2/

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction aggregates:						
Coarse aggregate (+1 1/2 inch) 3/	192	1,540	W	W	W	W
Coarse aggregate, graded 4/	2,760	18,700	W	W	W	W
Fine aggregate (-3/8 inch) 5/	911	5,970	W	W	W	W
Coarse and fine aggregate 6/	2,210	13,500	W	W	W	W
Other construction materials 7/	23	138	22,100	140,000	2,080	10,800
Agricultural 8/	13	92	--	--	--	--
Chemical and metallurgical 9/	(10/)	(10/)	--	--	(10/)	(10/)
Special 11/	(10/)	(10/)	--	--	--	--
Unspecified: 12/			--	--		
Actual	(10/)	(10/)	7,920	45,800	(10/)	(10/)
Estimated	1,650	10,500	--	--	138	891
Total	19,200	128,000	30,100	185,000	14,100	88,100

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

1/ Excludes marble from State total to avoid disclosing company proprietary data.

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

3/ Includes filter stone, macadam, and riprap and jetty stone.

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

5/ Includes stone sand (concrete), stone sand (bituminous mix or seal), screening (undesignated), and other fine aggregate.

6/ Includes graded road base or subbase, terrazzo and exposed aggregate, unpaved road surfacing, and crusher run (select material or fill).

7/ Includes drain fields.

8/ Includes agricultural limestone.

9/ Includes cement and lime manufacture.

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

11/ Includes whiting or whiting substitute.

12/ Includes production reported without a breakdown by end use and estimates for nonrespondents.

TABLE 5
 GEORGIA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1996,
 BY MAJOR USE CATEGORY 1/

Use	Quantity	Value	Value
	(thousand metric tons)	(thousands)	per ton
Concrete aggregate (including concrete sand)	3,220	\$12,200	\$3.78
Plaster and gunit sands	630	2,160	3.43
Concrete products (blocks, bricks, pipe, decorative, etc.)	178	565	3.17
Asphaltic concrete aggregates and other bituminous mixtures	W	W	15.83
Fill	W	W	2.07
Other miscellaneous uses	148	698	4.72
Unspecified: 2/			
Actual	1,020	3,940	3.85
Estimated	1,320	4,950	3.75
Total or average	6,520	24,500	3.75

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 production reported without a breakdown by end use and estimates for nonrespondents.

TABLE 6
 GEORGIA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1996,
 BY USE AND DISTRICT 1/ 2/

(Thousand metric tons and thousand dollars)

Use	District 2		District 3	
	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products 3/	565	3,020	3,470	11,900
Other miscellaneous uses 4/	10	47	139	651
Unspecified: 5/				
Actual	388	1,430	635	2,510
Estimated	206	771	1,110	4,170
Total	1,170	5,260	5,350	19,200

1/ Production reported in District 1 was included with "District 2" to avoid disclosing company proprietary data.

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

3/ Includes plaster and gunit sands.

4/ Includes asphaltic concrete aggregates and other bituminous mixtures and fill.

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