

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.

In 1998, the preliminary estimated value¹ of nonfuel mineral production for Georgia was \$1.79 billion, according to the U.S. Geological Survey (USGS). This was a more than 6.5% increase from that of 1997,² following a 3.4% decrease from 1996 to 1997. Georgia's nonfuel mineral production represented more than 4.5% of the total U.S. nonfuel mineral production value, and the State remained by value the sixth largest producing State.

Georgia was by far the leading clay-producing State in the Nation, accounting for more than 26% of total U.S. clay production. Kaolin remained the State's foremost nonfuel mineral commodity in 1998, accounting for 58% of Georgia's estimated total nonfuel mineral value and, of that, about 92% of its clay value. In 1998, nearly all other nonfuel mineral commodities increased in value, led by a \$59 million, or 6%, increase in the value of kaolin and a \$47 million, or 11%, increase in the value of crushed stone. Crushed stone accounted for more than 26% of the State's nonfuel mineral production value (table 1). Smaller increases (largest to smallest) in the values of portland cement, fuller's earth, and construction sand and gravel also contributed to the State's increase for the year. In 1997, increases in crushed stone, portland cement, and industrial sand and gravel values were not enough to balance out decreases in kaolin, fuller's earth, and dimension marble, resulting in the State's net drop in value for the year.

Based on USGS estimates of the quantities produced in the United States during 1998, Georgia remained first² among the 50 States in kaolin and fuller's earth, second in barite and crude mica, third in iron oxide pigments, fourth in common clays, fifth in dimension stone, and seventh in crushed stone and masonry cement. Georgia rose to fourth from fifth in the production of feldspar.

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 1998 USGS mineral production data published in this chapter are preliminary estimates as of November 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.

²Values, 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.

The following narrative information was provided by the Georgia Geologic Survey³ (GGS), in cooperation with representatives of Elberton Granite Association, the Georgia Mining Association, and the Georgia Crushed Stone Association (GCSA). Overall in 1998, Georgia's mining industry was strong and spent millions of dollars in research and development. Kaolin exports increased 2% over 1997 and kaolin was the leading export commodity out of the port of Savannah. However, the State's kaolin industry experienced strong competition during the year; Brazilian production notably cut into Georgia's overseas kaolin market. The French company Imetal SA, which recently acquired the bauxite operations of Mullite Corp., made an offer to buy ECC International, one of Georgia's leading kaolin producers.

The GCSA, which includes all major producers in Georgia, reported that in 1998 its quarries shipped a record total of nearly 68 million metric tons of crushed stone. In 1998, there were over 60 active quarries in Georgia, according to the GCSA. Several new quarries were brought on-line during the year, while others increased production capacity. In part, based on January 1999's alltime high record crushed stone production, continued growth of the State's crushed stone industry is expected throughout 1999. Additionally, industry representatives generally projected that increases in production should continue because of an anticipated 70% increase in funding for highway construction in the upcoming Federal Budget.

Throughout the crushed stone industry, company consolidations and increased automation at all levels of production were expected to continue in the near future. An industry-sponsored degree program in quarry management was in the planning and development stage and scheduled to start in the fall of 1999 at Southern Polytechnic State University in Marietta, GA. Atlanta metro area counties had continued air quality problems—particularly for ozone nonattainment. A State Clean Air Task Force was established to assure that Georgia will comply with the Federal Clean Air Act. Alternative transportation strategies for the Atlanta metro area could have a significant impact on future transportation-related construction.

Georgia's dimension granite industry includes operations in Elbert, Oglethorpe, Wilkes, Madison, Oconee, and Greene Counties (ranked by descending order of tons produced as reported in 1997 USGS canvass); however, most quarries and plants are in Elbert County. During 1998, there were 44 active quarries producing monumental-grade granite. The industry employed approximately 2,400 individuals with a quarry workforce of 283 production workers. In 1998, the total industry payroll was \$53.9 million while the quarry payroll was \$6.8 million. Although local sales of granite remained

³Bruce J. O'Connor, Supervisory Geologist, authored the text of mineral industry information submitted by the Georgia Geologic Survey.

strong in 1998, sales to historically favorable Pacific Rim markets remained somewhat weak. However, demand for curbing stone for markets in the northeastern United States continued to be very strong. In September, the Georgia Marble Co., operator of a dimension marble quarry in Picken's County, announced the acquisition of Central Granite Co., Inc., one of the largest monument manufacturing firms in the Elberton area. In order to address a continuing shortage of semiskilled and skilled labor, the dimension granite industry continued the development of job training programs for entry

level as well as existing employees.

An economic analysis of a possible severance tax on the State's mining industry was completed by a Georgia State University (GSU) professor and Director of GSU's Economic Forecasting Center. The study concluded that such a tax would be regressive in nature. In 1998 the Georgia Geologic Survey published a new edition of the *Mining Directory of Georgia*, listing more than 400 individual mines, pits, and quarries. This and other GGS publications and maps are available through the agency's office of maps and publications.

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

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1996		1997		1998 p/	
	Quantity	Value	Quantity	Value	Quantity	Value
Clays:						
Common	1,660	11,200	1,820	11,600	1,860	11,800
Fuller's earth	739	89,200	576	70,500	623	73,800
Kaolin	8,040	1,050,000	8,300	981,000	8,760	1,040,000 r/
Gemstones	NA	32	NA	8	NA	8
Sand and gravel:						
Construction	6,520	24,500	6,410	24,600	7,000	27,800
Industrial	313	5,650	520	9,330	520	9,330
Stone:						
Crushed 3/	63,400	401,000	65,300	429,000	71,000	476,000
Dimension 3/ metric tons	89,600	10,300	68,700	9,810	73,200	9,830
Combined values of barite, cement, feldspar, iron oxide pigments (crude), lime, mica (crude), stone (crushed marble, dimension marble)	XX	148,000	XX	144,000	XX	150,000
Total	XX	1,740,000	XX	1,680,000	XX	1,790,000 r/

r/ Revised. 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 values" data.

TABLE 2
GEORGIA: 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 2/	26 r/	15,900 r/	\$99,400 r/	\$6.27	28	15,800	\$97,900	\$6.21
Marble	7	W	W	W	7	W	W	W
Granite	44 r/	46,800 r/	298,000 r/	6.35	44	49,500	330,000	6.67
Dolomite	1	W	W	W	1	W	W	W
Total	XX	63,400	401,000	6.33	XX	65,300	429,000	6.56

r/ Revised. W Withheld to avoid disclosing company proprietary data; excluded from "Total."

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.

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

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Coarse aggregate (+1 1/2 inch):			
Riprap and jetty stone	436	\$4.450	\$10.22
Filter stone	580	4.480	7.73
Other coarse aggregate 3/	62	410	6.61
Coarse aggregate, graded:			
Concrete aggregate, coarse	6.110	39.400	6.44
Bituminous aggregate, coarse	3.390	25.200	7.44
Other graded coarse aggregate 4/	1.790	10.200	5.69
Fine aggregate (-3/8 inch):			
Stone sand, concrete	2.060	13.000	6.32
Stone sand, bituminous mix or seal	3.320	19.100	5.76
Screening, undesignated	1.150	6.550	5.68
Other fine aggregate	327	1.650	5.06
Coarse and fine aggregates:			
Graded road base or subbase	4.190	23.100	5.53
Crusher run or fill or waste	14.100	81.600	5.80
Other coarse and fine aggregate 5/	4.710	34.100	7.25
Agricultural limestone	W	W	9.59
Chemical and metallurgical: Cement manufacture	W	W	5.78
Special: Other fillers or extenders	490	3.120	6.37
Unspecified: 6/			
Actual	21.400	154.000	7.22
Estimated	547	3.690	6.74
Total	65,300	429,000	6.56

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

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

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

3/ Includes macadam.

4/ Includes bituminous surface-treatment aggregate and railroad ballast.

5/ Includes unpaved road surfacing.

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

TABLE 4
 GEORGIA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 1997, 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/	348	2,580	W	W	W	W
Coarse aggregate, graded 4/	1,900	12,900	W	W	W	W
Fine aggregate (-3/8 inch) 5/	1,120	7,410	W	W	W	W
Coarse and fine aggregate 6/	6,180	40,100	W	W	W	W
Other construction materials	--	--	--	--	--	--
Agricultural 7/	W	W	--	--	--	--
Chemical and metallurgical 8/	W	W	--	--	--	--
Special 9/	490	3,120	--	--	--	--
Unspecified: 10/			--	--		
Actual	7,770	62,100	W	W	W	W
Estimated	547	3,690	--	--	--	--
Total	19,100	136,000	30,700	192,000	15,500	100,000

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

1/ Excludes marble from State 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 and other graded coarse aggregate.

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

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

7/ Includes agricultural limestone.

8/ Includes cement and lime manufacture.

9/ Includes other fillers or extenders.

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

TABLE 5
 GEORGIA: 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)	4,060	\$15,400	\$3.80
Plaster and gunite sands	955	3,340	3.50
Concrete products (blocks, bricks, pipe, decorative, etc.)	150	674	4.49
Asphaltic concrete aggregates and other bituminous mixtures	12	27	2.25
Fill	63	103	1.63
Other miscellaneous uses 2/	220	1,450	6.58
Unspecified: 3/			
Actual	468	1,570	3.35
Estimated	475	2,030	4.28
Total or average	6,410	24,600	3.85

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

2/ Includes road base and coverings.

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

TABLE 6
 GEORGIA: 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/	W	W	W	W	4,320	15,700
Asphaltic concrete aggregates and road base	W	W	--	--	W	W
Fill	W	W	W	W	59	98
Other miscellaneous uses	450	2,630	657	2,610	441	1,540
Unspecified: 3/						
Actual	--	--	W	W	W	W
Estimated	132	506	132	718	211	809
Total	582	3,140	789	3,320	5,030	18,200

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 gunitite sands.

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