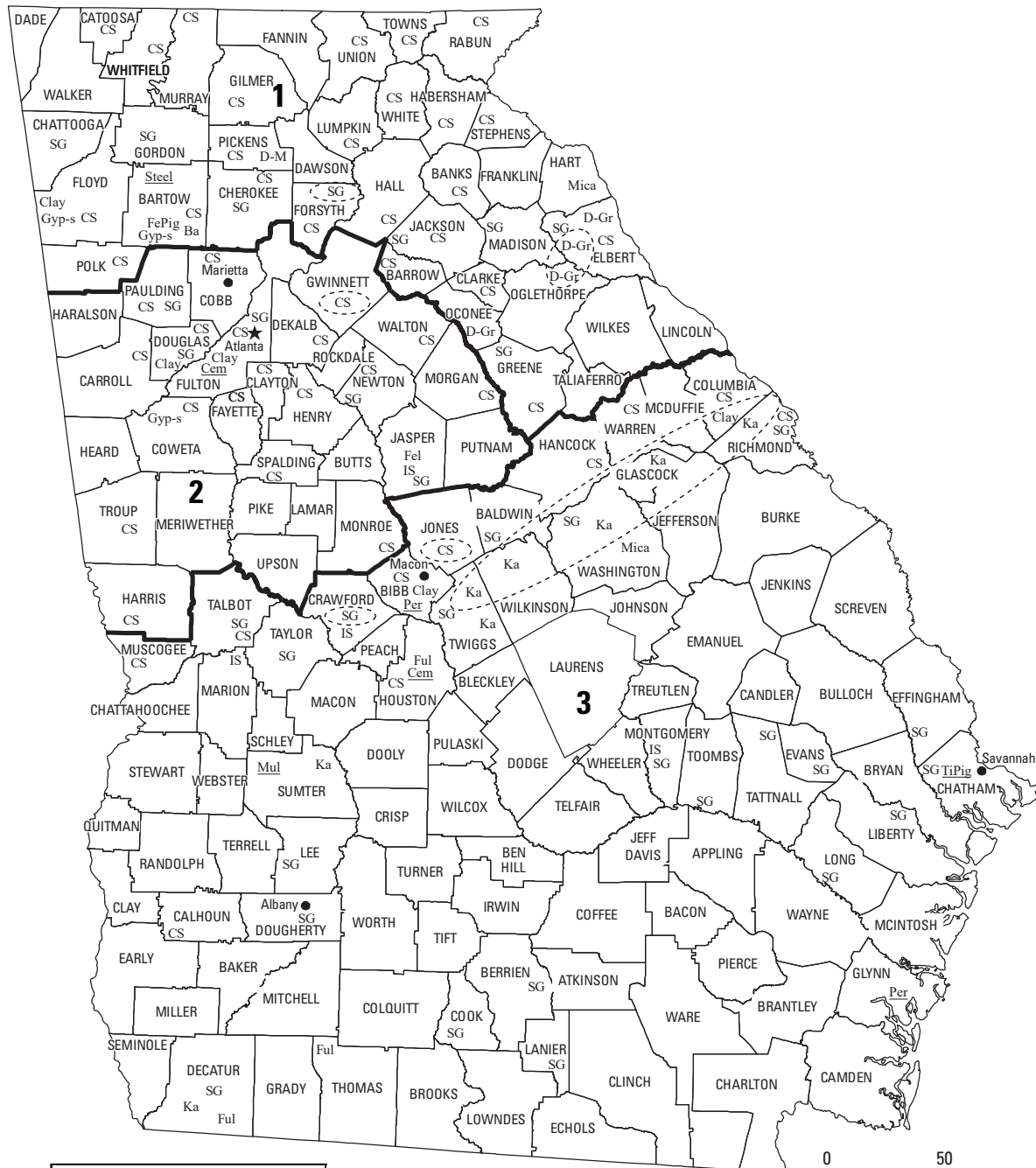




2010–2011 Minerals Yearbook

GEORGIA

GEORGIA



LEGEND		
—	County boundary	
★	Capital	
●	City	
1	Crushed stone/sand gravel district	
MINERAL SYMBOLS (Principal producing areas)		
Ba	Barite	
Cem	Cement plant	
Clay	Common clay	
CS	Crushed stone	
D-Gr	Dimension granite	
D-M	Dimension marble	
Fel	Feldspar	
FePig	Iron oxide pigments	
Ful	Fuller's earth	
Gyp-s	Synthetic gypsum	
IS	Industrial sand	
Ka	Kaolin	
Mica	Mica	
Mul	Synthetic mullite plant	
Per	Perlite plant	
SG	Construction sand and gravel	
Steel	Steel plant	
TiPig	Titanium dioxide pigment plant	
(Dashed circle)	Concentration of mineral operations	

Source: Georgia Department of Natural Resources, Environmental Protection Division/U.S. Geological Survey (2010–11).

THE MINERAL INDUSTRY OF GEORGIA

In 2011, Georgia's nonfuel raw mineral production¹ was valued at \$1.45 billion, based upon annual U.S. Geological Survey data (USGS). This was a \$5 million (1%) decrease from the State's total production value in 2010, which followed a \$52 million (4%) increase from the total production value of \$1.40 billion in 2009. In 2011, the State remained ranked 14th among the 50 States in total nonfuel raw mineral production value and accounted for almost 1.9% of the U.S. total nonfuel mineral production value of \$74.7 billion. On a per capita basis, Georgia ranked 24th in the Nation in nonfuel mineral production with a value of \$148, below the national average of \$240.

Kaolin clay and crushed stone remained the State's leading nonfuel mineral commodities by production value, accounting for more than 85% of the State's total nonfuel mineral production value in 2011 and 2010. These two mineral commodities have consistently accounted for over \$1 billion in combined production value and have averaged 83% of the State's total production value since 2001. In 2011, crushed stone had the largest increase in production value, increasing by \$11 million (2%), although production declined by 1.4%. Kaolin production and value remained relatively flat during 2011 from 2010. In 2010, kaolin clay had the largest increase in production value, increasing by \$83 million (12%), as production increased by 508,000 metric tons (t) (10%). Crushed stone had the greatest decrease in production value in the State, down by \$42 million (8%).

In 2011, dimension stone, common clays, barite, and gemstones were the only mineral commodities that were at, or above, 2008 production value levels. In 2011, common clays increased significantly in production value by almost \$3 million (78%), despite production slightly decreasing by 13,000 t (2%). Although industrial sand and gravel and construction

sand and gravel decreased in production by less than 3%, each increased in value by \$1.8 million (10%) and by \$1.3 million (5%), respectively. Lime, montmorillonite, portland cement, and masonry cement decreased in production value by more than 10% (values withheld—company proprietary data). Dimension stone decreased significantly in value and quantity by \$6.3 million (24%) and by 128,000 t (48%).

In 2010, the production value and quantity of dimension stone increased by \$9.7 million (57%) and by 116,000 t (76%). In 2010, the production value and quantity of fuller's earth (attapulgitite and montmorillonite) increased by more than 15% and more than 5%, respectively (values withheld—company proprietary data). In 2010, the production value and quantity of masonry cement, lime, and crude mica all increased more than 5% (values withheld—company proprietary data). In 2010, feldspar decreased significantly in production value and quantity by over 50% (values withheld—company proprietary data). The production values of construction sand and gravel continued to decrease in 2010, down by \$2.7 million (9%), as did industrial sand and gravel, down by \$1.5 million (8%).

In 2011 and 2010, Georgia continued to be the leading clay-producing State in the Nation, accounting for nearly 25% of the Nation's total clay production. The State remained the leading producer of kaolin clay, accounting for 93% of the Nation's total kaolin clay production. The State also remained first in the production of crude iron oxide pigments, among three producing States, and montmorillonite, among 10 producing States. Georgia remained second in the production of attapulgitite and barite, among two producing States.

The State rose to fourth from fifth in the production of common clay among 41 producing States in 2011 from 2010. In 2011, the State fell to fifth, after rising to first from fourth in 2010 in the production of dimension stone. Georgia accounted for 8% of the Nation's total dimension stone production. The State rose from second to first in 2011, and to second from third in 2010 in the production of mica among four producing States. Georgia remained sixth in the production of feldspar among seven producing States. In 2011, the State ranking declined in the production of masonry cement, down to eighth from seventh in 2010; crushed stone, down to 10th from 6th in 2010; and industrial sand and gravel, to 16th from 12th in 2010.

¹The 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 MINERAL PRODUCTION IN GEORGIA^{1,2}
(Thousand metric tons and thousand dollars)

Mineral	2009		2010		2011	
	Quantity	Value	Quantity	Value	Quantity	Value
Barite	7	1,350	7	1,350	7	1,350
Clays:						
Common	631	3,870	657	3,910	644	6,880
Fuller's earth ³	W	W	W	W	W	W
Kaolin	4,970	693,000	5,470	780,000	5,340	781,000
Gemstones, natural	NA	74	NA	75	NA	103
Sand and gravel:						
Construction	5,260	31,100	5,120	28,400	5,050	29,700
Industrial	775	19,300	670	17,800	655	19,600
Stone:						
Crushed	44,500 ^r	510,000 ^r	43,000	467,000	41,500	479,000
Dimension	153	16,900	269	26,600	141	20,300
Combined values of attapulgite, cement, feldspar, iron oxide, pigments (crude), lime, mica (crude), and values indicated by symbol W	XX	129,000 ^r	XX	131,000	XX	114,000
Total	XX	1,400,000 ^r	XX	1,460,000	XX	1,450,000

^rRevised. NA Not available. W Withheld to avoid disclosing company proprietary data. Withheld values included in "Combined values" data. XX Not applicable.

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

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

³Excludes attapulgite; included in "Combined values."

TABLE 2
GEORGIA: CRUSHED STONE SOLD OR USED IN THE UNITED STATES, BY TYPE¹

Type	2009			2010			2011		
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Number of quarries	Quantity (thousand metric tons)	Value (thousands)
Limestone ²	14	4,610 ^r	\$54,800 ^r	12	4,610	\$52,400	13	4,660	\$54,700
Marble	3	933 ^r	28,600 ^r	3	1,060	24,400	3	1,600	31,700
Granite	63	38,100	417,000	65	37,200	388,000	65	35,000	389,000
Sandstone and quartzite ³	2 ^r	836 ^r	8,640 ^r	2	203	2,270	--	--	--
Slate	--	1 ^r	--	1	7	168	1	17	425
Miscellaneous stone	1 ^r	19 ^r	418 ^r	--	--	--	3	210	2,370
Total or average	XX	44,500 ^r	510,000 ^r	XX	43,000	467,000	XX	41,500	479,000
			11.46			10.86			11.54

^rRevised. XX Not applicable. -- Zero.

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

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

³Includes sandstone-quartzite reported with no distinction between the two kinds of stone.

TABLE 3
 GEORGIA: CRUSHED STONE SOLD OR USED BY PRODUCERS
 IN 2010, BY USE¹

(Thousand metric tons and thousand dollars)

Use	Quantity	Value
Construction:		
Coarse aggregate (+1½ inch):		
Riprap and jetty stone	654	6,890
Filter stone	W	W
Other coarse aggregate	W	W
Coarse aggregate, graded:		
Concrete aggregate, coarse	W	W
Bituminous surface-treatment aggregate	W	W
Railroad ballast	W	W
Other graded coarse aggregate	W	W
Fine aggregate (-¾ inch):		
Stone sand, concrete	W	W
Screening, undesignated	W	W
Other fine aggregate	W	W
Coarse and fine aggregates:		
Graded road base or subbase	W	W
Crusher run or fill or waste	W	W
Other coarse and fine aggregates	W	W
Agricultural, agricultural limestone	68	600
Chemical and metallurgical:		
Cement manufacture	W	W
Lime manufacture	W	W
Special:		
Mining dusting or acid water treatment	W	W
Asphalt fillers or extenders	W	W
Other fillers or extenders	W	W
Unspecified:²		
Reported	17,800	184,000
Estimated	3,180	35,700
Total	43,000	467,000

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

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Reported and estimated production without a breakdown by end use.

TABLE 4
 GEORGIA: CRUSHED STONE SOLD OR USED BY PRODUCERS
 IN 2011, BY USE¹

(Thousand metric tons and thousand dollars)

Use	Quantity	Value
Construction:		
Coarse aggregate (+1½ inch):		
Riprap and jetty stone	409	5,280
Filter stone	W	W
Unspecified coarse aggregate	W	W
Coarse aggregate, graded:		
Concrete aggregate, coarse	986	6,530
Railroad ballast	884	9,460
Unspecified graded coarse aggregate	6,670	89,300
Fine aggregate (-¾ inch):		
Stone sand, concrete	854	11,100
Stone sand, bituminous mix or seal	W	W
Screening, undesignated	619	7,510
Unspecified fine aggregate	2,900	31,500
Coarse and fine aggregates:		
Graded road base or subbase	1,130	14,500
Unpaved road surface	W	W
Crusher run or fill or waste	W	W
Unspecified coarse and fine aggregates	6,350	52,000
Unspecified and other construction materials	17	425
Agricultural, agricultural limestone	123	982
Chemical and metallurgical, cement manufacture	W	W
Special:		
Mining dusting or acid water treatment	W	W
Asphalt fillers or extenders	W	W
Other fillers or extenders	W	W
Unspecified: ²		
Reported	13,300	152,000
Estimated	4,960	57,000
Total	41,500	479,000

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

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Reported and estimated production without a breakdown by end use.

TABLE 5
 GEORGIA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2010, BY USE AND DISTRICT¹

(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	W	W	W	W	W	W
Coarse aggregate, graded ³	W	W	W	W	3,490	29,200
Fine aggregate (-¾ inch) ⁴	W	W	W	W	W	W
Coarse and fine aggregates ⁵	W	W	W	W	W	W
Agricultural ⁶	--	--	--	--	68	600
Chemical and metallurgical ⁷	--	--	--	--	W	W
Special ⁸	W	W	--	--	W	W
Unspecified: ⁹						
Reported	5,060	57,200	5,670	61,500	7,030	64,800
Estimated	1,420	16,000	--	--	1,760	19,700
Total ¹⁰	10,600	136,000	14,400	161,000	17,900	169,000

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

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes macadam, riprap and jetty stone, filter stone, and other coarse aggregates.

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

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

⁵Includes graded road base or subbase, unpaved road surface, terrazzo and exposed aggregate, crusher run, roofing granules, and other coarse and fine aggregates.

⁶Includes agricultural limestone, poultry grit and mineral food, and other agricultural uses.

⁷Includes cement manufacture, lime manufacture, dead-burned dolomite manufacture, flux stone, chemical stone, glass manufacture, and sulfur oxide removal.

⁸Includes mine dusting or acid water treatment, whitening or whitening substance, and other fillers or extenders.

⁹Reported and estimated production without a breakdown by end use.

¹⁰District 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
 GEORGIA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2011, BY USE AND DISTRICT¹

(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	W	W	W	W	654	8,210
Coarse aggregate, graded ³	W	W	W	W	2,950	29,000
Fine aggregate (-¾ inch) ⁴	W	W	W	W	W	W
Coarse and fine aggregates ⁵	W	W	W	W	W	W
Other construction materials	17	425	--	--	--	--
Agricultural ⁶	--	--	--	--	123	982
Chemical and metallurgical ⁷	--	--	--	--	W	W
Special ⁸	W	W	--	--	W	W
Unspecified: ⁹						
Reported	2,860	33,700	4,150	48,600	W	W
Estimated	2,740	31,500	--	--	2,220	25,500
Total	11,300	144,000	12,700	146,000	17,500	188,000

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

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes macadam, riprap and jetty stone, filter stone, and other coarse aggregates.

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

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

⁵Includes graded road base or subbase, unpaved road surface, terrazzo and exposed aggregate, crusher run, roofing granules, and other coarse and fine aggregates.

⁶Includes agricultural limestone, poultry grit and mineral food, and other agricultural uses.

⁷Includes cement manufacture, lime manufacture, dead-burned dolomite manufacture, flux stone, chemical stone, glass manufacture, and sulfur oxide removal.

⁸Includes mine dusting or acid water treatment, whitening or whitening substance, and other fillers or extenders.

⁹Reported and estimated production without a breakdown by end use.

TABLE 7
 GEORGIA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2010,
 BY MAJOR USE CATEGORY¹

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate (including concrete sand)	2,270	\$12,500	\$5.51
Plaster and gunite sands	158	880	5.57
Concrete products (blocks, bricks, pipe, decorative, etc.)	18	100	5.56
Road base and coverings	13	74	5.69
Fill	51	225	4.41
Unspecified: ²			
Reported	1,300	7,410	5.70
Estimated	1,310	7,200	5.51
Total or average	5,120	28,400	5.54

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

²Reported and estimated production without a breakdown by end use.

TABLE 8
 GEORGIA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2011,
 BY MAJOR USE CATEGORY¹

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate (including concrete sand)	2,220	\$12,500	\$5.63
Plaster and gunite sands	142	788	5.55
Concrete products (blocks, bricks, pipe, decorative, etc.)	291	1,610	5.53
Road base and coverings	17	70	4.12
Fill	45	187	4.16
Unspecified: ²			
Reported	1,210	7,930	6.55
Estimated	1,120	6,590	5.88
Total or average	5,050	29,700	5.88

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Reported and estimated production without a breakdown by end use.

TABLE 9
 GEORGIA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2010,
 BY USE AND DISTRICT¹

(Thousand metric tons and thousand dollars)

Use	Districts 1 and 2		District 3		Unspecified districts	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregates and concrete products ²	W	W	W	W	--	--
Road base and coverings	13	74	--	--	--	--
Fill	W	W	W	W	--	--
Other miscellaneous uses	--	--	--	--	--	--
Unspecified: ³						
Reported	845	4,660	431	2,570	26	182
Estimated	156	861	1,150	6,340	--	--
Total ⁴	1,240	7,010	3,860	21,200	26	182

W Withheld to avoid disclosing company proprietary data; included in "Other miscellaneous uses." -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes plaster and gunite sands.

³Reported and estimated production without a breakdown by end use.

⁴District 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 10
 GEORGIA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2011,
 BY USE AND DISTRICT¹

(Thousand metric tons and thousand dollars)

Use	Districts 1 and 2		District 3		Unspecified districts	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregates and concrete products ²	175	1,290	2,480	13,600	--	--
Road base and coverings	17	70	--	--	--	--
Fill	37	159	8	28	--	--
Unspecified: ³						
Reported	891	5,150	281	2,480	41	299
Estimated	183	1,080	934	5,510	--	--
Total	1,300	7,750	3,700	21,600	41	299

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes plaster and gunite sands.

³Reported and estimated production without a breakdown by end use.