2012–2013 Minerals Yearbook

ALABAMA [ADVANCE RELEASE]

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

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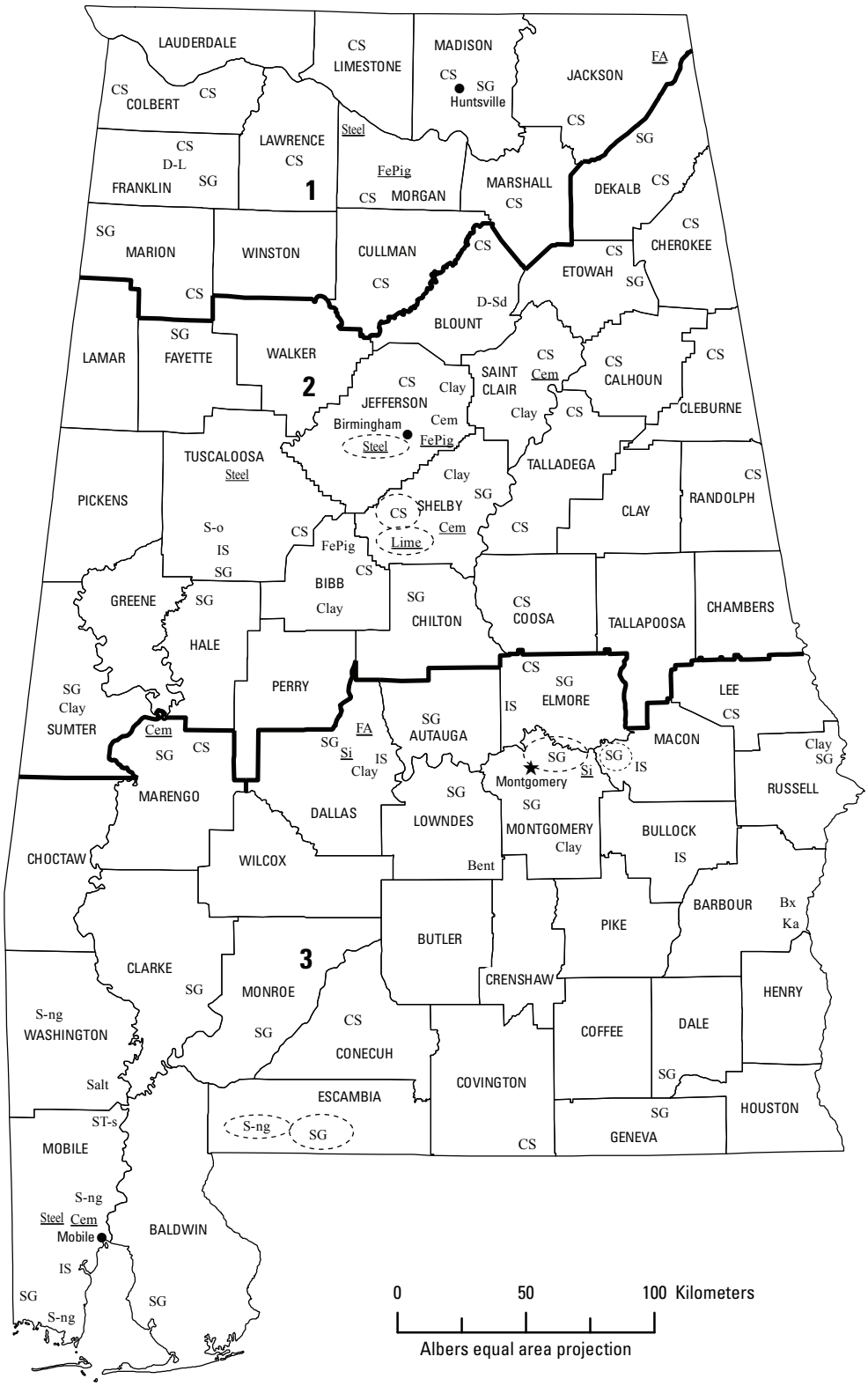
ALABAMA



LEGEND

——	County boundary
★	Capital
●	City
1——	Crushed stone/sand and gravel district boundary

MINERAL SYMBOLS
(Principal producing areas)

Bent	Bentonite
Bx	Bauxite
Cem	Cement plant
Clay	Common clay
CS	Crushed stone
D-L	Dimension limestone
D-Sd	Dimension sandstone
FA	Ferroalloys plant
FePig	Iron oxide pigments
FePig	Iron oxide pigment plant
IS	Industrial sand
Ka	Kaolin
Lime	Lime plant
Salt	Salt
SG	Construction sand and gravel
Si	Silicon plant
S-ng	Sulfur (natural gas)
S-o	Sulfur (oil)
ST-s	Stainless steel plant
Steel	Steel plant
⬭	Concentration of mineral operations

Source: Geological Survey of Alabama/U.S. Geological Survey (2012–13).

The Mineral Industry of Alabama

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

In 2013, the value of the nonfuel mineral production[1] in the State of Alabama increased to $1.04 billion (not including steel), 1.4% of the total U.S. nonfuel mineral production, ranking it 24th in the Nation; however, it still had not reached pre-2009-recession levels. In 2012, the corresponding value was $991 million, 1.3% of the U.S. total nonfuel mineral production, ranking it 23d among the 50 States. In 2013, on a per capita basis, nonfuel mineral production in Alabama had a value of $215 compared with the national average of $238. In 2012, the per capita value was $206 compared with the national average of $241.

The value of nonfuel mineral production in Alabama for years 2006 through 2013 was as follows (in millions of dollars): $1,360 (2006), $1,350 (2007), $1,300 (2008), $1,020 (2009), $969 (2010), $955 (2011), $991 (2012), and $1,040 (2013).

In 2013, there were 1,186 employees in nonfuel mineral mines in Alabama and 1,596 in mills (not including steel) and preparation plants. In 2012, the corresponding numbers were 1,164 in nonfuel mineral mines and 1,623 in mills and preparation plants (U.S. Mine Safety and Health Administration, 2013, p. 7; 2014, p. 7). In 2013, the average annual wage in Alabama for all mining was $78,600 compared with $41,400 for all industries. In 2012, the corresponding figures were $76,500 and $41,100, respectively (National Mining Association, unpub. data, February 4, 2016).

In 2013 and 2012, on the basis of production quantity, Alabama continued to be a leading State for the production of clays, ranking second in common clays out of 35 producing States, third in bentonite clays out of 10 producing States, and third in kaolin out of 9 producing States.

In 2013, the State also was a major producer of other industrial minerals, ranking second in masonry cement out of 26 producing States, second in lime out of 33 producing States, and second in iron oxide pigments out of 3 producing States.

Alabama also produced construction sand and gravel, crushed stone, dimension stone, industrial sand and gravel, natural gemstones, portland cement, and salt in 2012 and in 2013 (table 1). All metal production in the State, especially that of raw steel, was the result of the processing of materials acquired from other domestic and foreign sources.

[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 February 2016. 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.

Commodity Review

The following information from the Alabama Department of Labor (2013, p. 10–26) may differ from U.S. Geological Survey (USGS) data, which are based on company responses to USGS surveys and estimation for nonrespondents. The USGS withheld some data to avoid disclosing company proprietary data.

Industrial Minerals

Mineral industry activity with respect to industrial minerals is as follows:

- December 2013—Three operations in Barbour County produced 123,000 metric tons (t) of bauxite, three operations in Cherokee and St. Clair Counties mined 14,600 t of chert, 15 pits produced 1.12 Mt of clay, two quarries mined 5.94 Mt of dolomite in Bibb and Shelby Counties, four operations produced 2.23 Mt of granite, one mine produced hematite, 45 mines produced 26.1 Mt of limestone, 19 operations produced 847,000 t of industrial sand, four quarries produced 406,000 t of sandstone, 38 pits produced 1.14 Mt of sand and clay, 34 operations produced 7.45 Mt of sand and gravel, five mines produced 155,000 t of shale, and there were two marble operations for the year.
- December 2013—The Alabama Department of Transportation (2014, p. 2–49) listed the mines and operations from which it got its aggregates for road and highway building and maintenance.

References Cited

Alabama Department of Labor, 2013, Annual report—Statistical Supplement of the Department of Labor, Mining and Reclamation Division, Mine Safety and Inspection Section for the fiscal year ending September 30, 2013: Alabama Department of Labor, 40 p. (Accessed January 28, 2016, at http://labor.alabama.gov/inspections/mining/docs/2013_annual.pdf.)

Alabama Department of Transportation, 2014, List I–1—Sources of coarse and fine aggregates: Montgomery, AL: Alabama Department of Transportation, 49 p. (Accessed February 1, 2016, at http://www.dot.state.al.us/mtweb/Testing/MSDSAR/doc/QMSD/Li01.pdf.)

U.S. Mine Safety and Health Administration, [2013], Mine injury and worktime, quarterly, January–December 2012, Final, closeout edition, 33 p. (Accessed February 4, 2016, at http://arlweb.msha.gov/Stats/Part50/WQ/MasterFiles/MIWQ%20Master_20125.pdf.)

U.S. Mine Safety and Health Administration, [2014], Mine injury and worktime, quarterly, January–December 2013, Final, closeout edition, 34 p. (Accessed February 4, 2016, at http://arlweb.msha.gov/Stats/Part50/WQ/MasterFiles/MIWQ%20Master_20135.pdf.)

TABLE 1
NONFUEL MINERAL PRODUCTION IN ALABAMA[1, 2]

(Thousand metric tons and thousand dollars)

Mineral	2011		2012		2013	
	Quantity	Value	Quantity	Value	Quantity	Value
Clays, common	1,190	24,100	1,210	9,070	1,240	8,390
Gemstones, natural	NA	7	NA	7	NA	7
Lime	2,180	255,000	2,240	287,000	2,270	289,000
Sand and gravel:						
Construction	9,910	53,600	9,060	54,500	8,450	55,400
Industrial	352	10,500	401	13,200	334	14,900
Stone, crushed	33,200 r	289,000 r	34,400	300,000	33,400	309,000
Combined values of cement, clays (bentonite, kaolin), iron oxide pigments (crude), mica [crude (2011)], salt, stone (dimension)	XX	323,000 r	XX	327,000	XX	365,000
Total	XX	955,000 r	XX	991,000	XX	1,040,000

[r]Revised. 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 no more than three significant digits; may not add to totals shown.

TABLE 2
ALABAMA: CRUSHED STONE SOLD OR USED IN THE UNITED STATES, BY TYPE[1]

Type	2012				2013			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone[2]	48	27,300	$249,000	$9.13	47	26,200	$251,000	$9.58
Dolomite	4	2,110	15,900	7.51	4	2,190	21,100	9.62
Marble	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Granite	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Sandstone and quartzite[4]	7	528	4,300	8.14	7	654	6,530	9.99
Slate	2	554	4,860	8.76	2	525	4,910	9.34
Miscellaneous stone	8	3,880	26,100	6.71	8	3,760	24,900	6.62
Total or average	XX	34,400	300,000	8.74	XX	33,400	309,000	9.25

XX Not applicable.
[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.
[3]Withheld to avoid disclosing company proprietary data; included with "Miscellaneous stone."
[4]Includes sandstone-quartzite reported with no distinction between the two kinds of stone.

TABLE 3
ALABAMA: CRUSHED STONE SOLD OR USED BY PRODUCERS BY USE[1]

Use	2012 Quantity (thousand metric tons)	2012 Value (thousands)	2012 Unit value	2013 Quantity (thousand metric tons)	2013 Value (thousands)	2013 Unit value
Construction:						
Coarse aggregate (+1½ inch):						
Riprap and jetty stone	W	W	W	157	$1,970	$12.54
Filter stone	--	--	--	W	W	W
Unspecified coarse aggregate	W	W	W	489	6,510	13.33
Coarse aggregate, graded:						
Concrete aggregate, coarse	W	W	W	W	W	W
Bituminous aggregate, coarse	247	$2,000	$8.10	W	W	W
Bituminous surface-treatment aggregate	81	600	7.41	--	--	--
Railroad ballast	W	W	W	--	--	--
Unspecified graded coarse aggregate	W	W	W	W	W	W
Fine aggregate (-⅜ inch):						
Stone sand, concrete	W	W	W	--	--	--
Stone sand, bituminous mix or seal	--	--	--	W	W	W
Screening, undesignated	W	W	W	W	W	W
Unspecified fine aggregate	W	W	W	903	8,610	9.53
Coarse and fine aggregates:						
Graded road base or subbase	235	2,290	9.75	201	2,030	10.13
Unpaved road surface	W	W	W	--	--	--
Terrazzo and exposed aggregate	W	W	W	W	W	W
Crusher run or fill or waste	W	W	W	391	3,810	9.74
Roofing granules	--	--	--	W	W	W
Unspecified coarse and fine aggregates	5,210	54,400	10.43	W	W	W
Agricultural:						
Agricultural Limestone	W	W	W	136	1,170	8.60
Chemical and metallurgical:						
Cement manufacture	W	W	W	W	W	W
Lime manufacture	2,610	20,800	7.99	W	W	W
Dead-burned dolomite manufacture	--	--	--	--	--	--
Flux stone	230	3,560	15.49	--	--	--
Sulfur oxide removal	--	--	--	W	W	W
Special:						
Mining dusting or acid water treatment	--	--	--	W	W	W
Asphalt fillers or extenders	--	--	--	W	W	W
Other fillers or extenders	--	--	--	W	W	W
Other miscellaneous uses and specified uses not listed	283	1,810	6.39	1,940	5,340	2.76
Unspecified:[2]						
Reported	4,930	45,400	9.20	5,030	47,900	9.53
Estimated	11,100	80,300	7.21	10,500	89,600	8.53
Total or average	34,400	300,000	8.74	33,400	309,000	9.25

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

TABLE 4

ALABAMA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2012, 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]	W	W	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	W	W
Agricultural[6]	W	W	W	W	--	--
Chemical and metallurgical[7]	--	--	W	W	W	W
Special	--	--	--	--	--	--
Other miscellaneous uses and specified uses not listed[8]	W	W	--	--	W	W
Unspecified:[9]						
Reported	1,620	14,300	2,180	20,900	1,130	10,200
Estimated	844	7,700	8,850	59,900	1,450	12,700
Total	8,000	74,000	22,100	178,000	4,290	48,300

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 macadam, riprap and jetty stone, filter stone, and unspecified coarse aggregate.

[3]Includes concrete aggregate (coarse), bituminous aggregate (coarse), bituminous surface-treatment aggregate, railroad ballast, and unspecified graded coarse aggregate.

[4]Includes stone sand (concrete), screening (undesignated), and unspecified fine aggregate.

[5]Includes graded road base or subbase, unpaved road surface, terrazzo and exposed aggregate, crusher run, and unspecified coarse and fine aggregates.

[6]Includes agricultural limestone.

[7]Includes cement manufacture, lime manufacture, and flux stone.

[8]Includes drain fields, waste material, lightweight aggregate (slate), pipe bedding, refractory stone (including ganister), and other miscellaneous uses.

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

TABLE 5

ALABAMA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2013, 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]	281	2,880	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]	3,060	10,700	W	W	W	W
Agricultural[6]	W	W	W	W	--	--
Chemical and metallurgical[7]	--	--	W	W	W	W
Special[8]	--	--	W	W	W	W
Other miscellaneous uses and specified uses not listed[9]	--	--	1,940	5,340	--	--
Unspecified:[10]						
Reported	1,380	12,900	2,760	26,600	890	8,430
Estimated	558	5,210	8,520	71,100	1,420	13,200
Total	8,170	81,300	21,400	185,000	3,780	42,500

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 macadam, riprap and jetty stone, filter stone, and unspecified coarse aggregate.

[3]Includes concrete aggregate (coarse), bituminous aggregate (coarse), bituminous surface-treatment aggregate, railroad ballast, and unspecified graded coarse aggregate.

[4]Includes stone sand (concrete), screening (undesignated), and unspecified fine aggregate.

[5]Includes graded road base or subbase, unpaved road surface, terrazzo and exposed aggregate, crusher run, and unspecified coarse and fine aggregates.

[6]Includes agricultural limestone.

[7]Includes cement manufacture, lime manufacture, and flux stone.

[8]Includes asphalt fillers or extenders, whiting or whitening substance, and other fillers or extenders.

[9]Includes drain fields, waste material, lightweight aggregate (slate), pipe bedding, refractory stone (including ganister), and other miscellaneous uses.

[10]Reported and estimated production without a breakdown by end use.

TABLE 6
ALABAMA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2012,
BY MAJOR USE CATEGORY[1]

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate and concrete products	3,200	$19,100	$5.97
Asphaltic concrete aggregates and other bituminous mixtures	226	1,310	5.80
Road base and coverings	73	433	5.93
Road and other stabilization (lime)	3	13	4.33
Fill	287	1,170	4.08
Snow and ice control	3	42	14.00
Other miscellaneous uses[2]	109	1,020	9.36
Unspecified:[3]			
Reported	27	231	8.56
Estimated	5,140	31,200	6.07
Total or average	9,060	54,500	6.02

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

TABLE 7
ALABAMA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2013,
BY MAJOR USE CATEGORY[1]

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate and concrete products	2,830	$19,900	$7.03
Asphaltic concrete aggregates and other bituminous mixtures	335	2,080	6.21
Road base and coverings	44	288	6.55
Fill	293	1,140	3.89
Other miscellaneous uses[2]	20	189	9.45
Unspecified:[3]			
Reported	--	--	--
Estimated	4,930	31,800	6.45
Total or average	8,450	55,400	6.55

--Zero.
[1]Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.
[2]Includes snow and ice control.
[3]Reported and estimated production without a breakdown by end use.

TABLE 8

ALABAMA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2012, 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	1,920	10,300
Asphaltic concrete aggregates and road base materials[2]	W	W	W	W	247	1,370
Fill	--	--	26	87	261	1,090
Other miscellaneous uses[3]	(4)	4	30	240	82	819
Unspecified:[5]						
Reported	--	--	17	165	11	66
Estimated	11	67	158	958	4,970	30,100
Total	768	5,390	801	5,280	7,490	43,800

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 road and other stabilization (lime).

[3]Includes filtration, and snow and ice control.

[4]Less than ½ unit.

[5]Reported and estimated production without a breakdown by end use.

TABLE 9

ALABAMA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2013, 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	1,820	12,700
Asphaltic concrete aggregates and road base coverings	W	W	W	W	373	2,240
Fill	--	--	1	11	291	1,130
Other miscellaneous uses[2]	(3)	128	1	13	19	177
Unspecified:[4]						
Reported	--	--	--	--	--	--
Estimated	30	196	647	4,170	4,250	27,400
Total	877	6,310	820	5,420	6,750	43,600

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 snow and ice control.

[3]Less than ½ unit.

[4]Reported and estimated production without a breakdown by end use.