

THE MINERAL INDUSTRY OF MISSISSIPPI

This chapter has been prepared under a Memorandum of Understanding between the U.S. Geological Survey and the Mississippi Department of Environmental Quality, Office of Geology, for collecting information on all nonfuel minerals.

In 1998, the preliminary estimated value¹ of nonfuel mineral production for Mississippi was \$190 million, according to the U.S. Geological Survey (USGS). This was a more than 8% increase from that of 1997,² following a 21.5% increase from 1996 to 1997.

Construction sand and gravel was Mississippi's leading nonfuel mineral, accounting for almost 39% of the State's value in 1998. It was followed by portland cement, fuller's earth, and crushed stone. Most of the State's rise in value in 1998 resulted from the increase in construction sand and gravel, further supported by smaller though significant increases in fuller's earth and portland cement (table 1). Only crushed stone and bentonite values decreased during the year. In 1997, a \$23.6 million increase in the value of crushed stone plus small to moderate increases in the values of industrial sand and gravel and portland cement accounted for most of Mississippi's significant increase.

Based on USGS estimates of the quantities of minerals produced in the 50 States during 1998, Mississippi remained second² in fuller's earth and fourth in ball clay and bentonite. In addition to construction sand and gravel, significant quantities of common clays were produced in the State.

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 February 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.

Metals produced in Mississippi, especially raw steel, were processed from materials received from other domestic and foreign sources.

The following narrative information was provided by the Mississippi Department of Environmental Quality's Office of Geology³ (OG); the agency reported mining activity during 1998 for sand, gravel, industrial and brick-grade clays (including some of the highest-grade calcium bentonite in the world), as well as some quarrying for limestone and dolomite.

The OG's Mining and Reclamation Division (MRD), charged with enforcement of the Mississippi Surface Mining and Reclamation Act of 1977 (SMRA), regulates Mississippi's mining activities. The mining industry is one of the State's most important industries, contributing thousands of jobs and tens of millions of dollars to the Mississippi economy. The MRD has jurisdiction over about 6,900 hectares being mined in the State; this land area includes, in addition to the nonfuel minerals listed in table 1, the extraction of such materials as topsoil and other soils, borrow, and fill materials.

The OG and its divisions compile data based on its fiscal year (July 1 to June 30). In fiscal year 1998, MRD approved 47 new mining permits and performed nearly 1,200 inspections of existing mines. Mining operations using 1.6 hectares of land or less do not need a mining permit but have to submit a notice of exemption to MRD. In 1998, 114 notices of exempt operations were received. Active mining permits on file at the end of fiscal year 1998 totaled 780, while the total exemptions were 832.

The MRD continued to place emphasis on getting mined land reclaimed and put back into useful and productive purposes. In accordance with the SMRA, mine operators must post a performance bond that is released only upon satisfactory reclamation of the land affected by mining activities. In fiscal year 1998, more than 543 bond release hectares were reclaimed. More bond hectares were reclaimed and more final bond releases were granted in fiscal year 1998 than in any previous year.

³James E. Starnes, Geologist with the Mississippi Department of Environmental Quality's Office of Geology, provided the Mississippi mineral industry information.

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

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1996		1997		1998 p/	
	Quantity	Value	Quantity	Value	Quantity	Value
Clays:						
Ball	73	4,540	W	W	W	W
Bentonite	145	4,480	W	W	W	W
Common	534	3,610	502	3,500	513	3,530
Fuller's earth	379	27,800	388	28,100	369	30,800
Gemstones	NA	1	NA	1	NA	5
Sand and gravel: Construction	13,400	60,600	13,000	59,600	15,600	73,300
Stone: Crushed 3/	2,180	9,300	5,180	32,900	4,900	29,400
Combined values of cement (portland), sand and gravel (industrial), stone (crushed marl), and values indicated by symbol W	XX	33,500	XX	51,300	XX	52,600
Total	XX	144,000	XX	175,000	XX	190,000

p/ Preliminary. NA Not available. W Withheld to avoid disclosing company proprietary data; value included with "Combined values" data. 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
MISSISSIPPI: 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
Calcareous marl	1	(2/)	(2/)	(2/)	1	(2/)	(2/)	(2/)
Limestone	4	2,180	\$9,300	\$4.26	12	5,180	\$32,900	\$6.36
Total	XX	2,180	9,300	4.26	XX	5,180	32,900	6.36

XX Not applicable.

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

2/ Excluded from State total to avoid disclosing company proprietary data.

TABLE 3
MISSISSIPPI: 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	W	W	\$6.31
Other coarse aggregate	707	3,750	5.31
Bituminous aggregate, coarse	W	W	5.54
Bituminous surface-treatment aggregate	W	W	5.77
Coarse aggregate, graded:			
Railroad ballast	W	W	5.75
Other graded coarse aggregate	1,150	7,090	6.19
Fine aggregate (-3/8 inch):			
Stone sand, concrete	W	W	5.70
Stone sand, bituminous mix or seal	W	W	5.47
Other fine aggregate	437	2,220	5.07
Coarse and fine aggregates:			
Crusher run or fill or waste	W	W	5.55
Other coarse and fine aggregates	1,430	13,100	9.19
Agricultural limestone	62	655	10.58
Chemical and metallurgical: Cement manufacture	W	W	3.40
Unspecified: Estimated 3/	W	W	W
Total	5,180	32,900	6.36

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

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

2/ Includes limestone; excludes calcareous marl to avoid disclosing company proprietary data.

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

TABLE 4
MISSISSIPPI: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 1997,
BY USE AND DISTRICT 1/ 2/ 3/

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		Unspecified districts	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction aggregates:						
Coarse aggregate (+1 1/2 inch) 4/	W	W	W	W	650	2,870
Coarse aggregate, graded 5/	W	W	W	W	902	3,970
Fine aggregate (-3/8 inch) 6/	W	W	W	W	399	1,770
Coarse and fine aggregate 7/	W	W	W	W	W	W
Agricultural 8/	W	W	W	W	W	W
Chemical and metallurgical 9/	W	W	--	--	--	--
Unspecified: 10/						
Actual	--	--	--	--	--	--
Estimated	--	--	W	W	--	--
Total	2,320	17,000	355	4,740	2,500	11,200

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

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

2/ Excludes calcareous marl from State total to avoid disclosing company proprietary data.

3/ No production reported for District 3.

4/ Includes riprap and jetty stone and other coarse aggregate.

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

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

7/ Includes crusher run (select material or fill) and other coarse and fine aggregates.

8/ Includes agricultural limestone.

9/ Includes cement manufacture.

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

TABLE 5
MISSISSIPPI: 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)	4.870	\$20.200	\$4.16
Concrete products (blocks, bricks, pipe, decorative, etc.)	55	289	5.25
Asphaltic concrete aggregates and other bituminous mixtures	2.420	12.200	5.04
Road base and coverings	1.660	7.960	4.79
Fill	131	273	2.08
Other miscellaneous uses 2/	58	339	5.84
Unspecified: 3/			
Actual	1.840	8.530	4.63
Estimated	2.020	9.790	4.86
Total or average	13.000	59.600	4.57

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

2/ Includes filtration, plaster and gunite sands, and road and other stabilization (cement).

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

TABLE 6
MISSISSIPPI: 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		Unspecified districts	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate (including concrete sand)	1,730	7,960	2,650	10,700	330	730	149	808
Asphaltic concrete aggregates and other bituminous	W	W	893	4,510	W	W	100	252
Road base and covering	352	1,450	734	3,330	495	2,960	81	223
Other miscellaneous uses 2/	1,440	7,550	100	353	111	389	16	18
Unspecified 3/	1,920	9,330	1,130	5,610	807	3,380	--	--
Total	5,450	26,300	5,510	24,500	1,740	7,460	346	1,300

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 concrete products, fill, filtration, plaster and gunite sand, and road and other stabilization (cement).

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