

THE MINERAL INDUSTRY OF TENNESSEE

This chapter has been prepared under a Memorandum of Understanding between the U.S. Bureau of Mines, U.S. Department of the Interior, and the Tennessee Division of Geology for collecting information on all nonfuel minerals.

In 1995, Tennessee ranked 18th for the 4th time in the past 5 years among the 50 States in total nonfuel mineral production value,¹ according to the U.S. Geological Survey (USGS). The estimated value for 1995 was more than \$659 million, an 18% increase from that of 1994. This followed an 18% increase from 1993 to 1994 (based on final data). The State accounted for a little less than 2% of the U.S. total nonfuel mineral production value.

Crushed stone and zinc, by value the State's leading mineral commodities, provided large portions of Tennessee's increased nonfuel mineral value in both 1994 and 1995. In 1995, a significant increase in gemstone value and moderate increases in portland cement and fuller's earth clays accounted for most of the remainder of the year's increase. Crushed stone has been Tennessee's leading commodity for more than 25 years, except for 1981 when zinc was first. In 1995, crushed stone accounted for about 44% of the State's total nonfuel mineral production value. Compared with 1994, other mineral commodities that increased in value in 1995 were ball clays, lime, industrial sand and gravel, masonry cement, silver, and copper. Decreases occurred in construction sand and gravel, dimension stone, common clays, and barite.

Compared with USGS estimates of the quantities produced in the other 49 States, Tennessee remained the leading gemstone- and ball clay-producing State, second in

zinc, and seventh in fuller's earth. While the State increased from 11th to 10th in the production of crushed stone, Tennessee's minerals industry produced significant quantities of portland and masonry cement, construction and industrial sand and gravel, and lime. The State ranked 10th in the production of primary aluminum, which was processed from raw materials received from foreign sources.

The Tennessee Division of Geology (TAG)² reported that the State's zinc mining industry had another active year in 1995. ASARCO Incorporated's east Tennessee zinc mining operations continued on a 7-day workweek at four mines. Approximately 70,000 metric tons (155 million pounds) of zinc concentrate was produced and a record 270,000 metric tons (300,000 short tons) of agricultural limestone was shipped.

Savage Zinc Co., a U.S. subsidiary of Savage Resources Ltd. (Australia), continued operation of the Gordonsville-Elmwood-Cumberland mining and milling complex in middle Tennessee and the electrolytic refinery in Clarksville. Savage also operates the Jefferson City Mine and mill and the Clinch Valley Mine and mill (formerly named the Idol Mine), two zinc mines in eastern Tennessee.

Short Mountain Silica Co., of Mooresburg, continued as a major producer of glass sand as well as sand for a

TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN TENNESSEE^{1 2}

Mineral	1993		1994		1995 ^P	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
Clays ³ thousand metric tons	607	\$25,700	665	\$28,600	653	\$29,300
Gemstones	NA	21,800	NA	23,100	NA	35,400
Sand and gravel						
Construction thousand metric tons	^e 7,200	^e 34,000	8,710	38,000	7,600	33,400
Industrial metric tons	644,000	11,700	660,000	11,600	768,000	13,200
Stone:						
Crushed thousand metric tons	43,500	227,000	49,200	265,000	52,200	287,000
Dimension metric tons	4,550	552	W	W	W	W
Combined value of barite (1994-95), cement, clays [bentonite (1993-94), common, fuller's earth], copper, lead (1993-94), lime, silver, zinc, and values indicated by symbol W	XX	189,000	XX	235,000	XX	261,000
Total	XX	510,000	XX	602,000	XX	659,000

^eEstimated. ^PPreliminary. NA Not available. W Withheld to avoid disclosing company proprietary data; value included with "Combined value" data. XX Not applicable.

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

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

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

variety of other uses.

In the Coker Creek gold district of Monroe County in east Tennessee, the East Coast Prospectors Club, headquartered in Ellijay, GA, continued to maintain leases on two tracts of land where members mine placer gold using portable dredges and pans. In addition, Coker Creek Village operated a pan-for-fee operation for naturally occurring placer gold.

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 1995 USGS mineral production data are estimates, as of Dec. 1995. For some commodities, especially 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 No. 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.

²This report includes information provided by the TAG.

¹The terms "nonfuel mineral production" and related "values" encompass

TABLE 2
TENNESSEE: CRUSHED STONE¹ SOLD OR USED BY PRODUCERS IN 1994, BY USE²

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Coarse aggregate (+1 1/2 inch):			
Macadam	64	\$282	\$4.41
Riprap and jetty stone	1,340	6,820	5.11
Filter stone	367	1,810	4.94
Other coarse aggregate	139	656	4.72
Coarse aggregate, graded:			
Concrete aggregate, coarse	4,000	19,200	4.80
Bituminous aggregate, coarse	11,100	56,000	5.06
Bituminous surface-treatment aggregate	2,280	14,800	6.50
Railroad ballast	355	1,570	4.42
Other graded coarse aggregate	1,060	5,660	5.33
Fine aggregate (-3/8 inch):			
Stone sand, concrete	738	5,420	7.34
Stone sand, bituminous mix or seal	556	2,720	4.88
Screening, undesignated	2,830	15,700	5.54
Other fine aggregate	W	W	4.88
Coarse and fine aggregates:			
Graded road base or subbase	11,300	55,800	4.95
Unpaved road surfacing	562	2,980	5.30
Terrazzo and exposed aggregate	W	W	4.57
Crusher run or fill or waste	1,980	8,490	4.29
Other coarse and fine aggregates	817	4,140	5.07
Other construction materials	1,550	7,540	4.87
Agricultural: Agricultural limestone³	(4)	(4)	8.04
Chemical and metallurgical:			
Cement manufacture	(4)	(4)	5.17
Lime manufacture	(4)	(4)	16.50
Glass manufacture	(4)	(4)	9.88
Sulfur oxide removal	(4)	(4)	4.20
Special:			
Mine dusting or acid water treatment	(4)	(4)	21.20
Asphalt fillers or extenders	(4)	(4)	8.55
Whiting or whiting substitute	(4)	(4)	11.00
Other fillers or extenders	(4)	(4)	10.90
Other specified uses not listed	4,020	33,000	8.21
Unspecified:⁵			
Actual	2,020	10,700	5.31
Estimated	2,240	12,100	5.42
Total	49,200	265,000	5.39

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

¹Includes dolomite, granite, limestone, limestone-dolomite, miscellaneous stone, and sandstone.

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

³Includes poultry grit and mineral food and other agricultural uses.

⁴Withheld to avoid disclosing company proprietary data; included with "Other specified uses not listed."

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

TABLE 3
TENNESSEE: CRUSHED STONE SOLD OR USED, BY KIND¹

Kind	1993				1994			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone ²	107	38,800	\$204,000	\$5.26	104	43,500	\$237,000	\$5.44
Dolomite	9	W	W	4.71	10	W	W	5.00
Granite	1	W	W	4.96	1	W	W	4.96
Sandstone	1	W	W	5.51	1	W	W	5.52
Miscellaneous stone	1	W	W	5.26	1	W	W	5.44
Total	XX	43,500	227,000	5.20	XX	49,200	265,000	5.39

¹Revised. W Withheld to avoid disclosing proprietary data; included in "Total." XX Not applicable.

²Data are rounded to three significant digits.

³Includes "Limestone-dolomite" reported with no distinction between the two.

TABLE 4
TENNESSEE: CRUSHED STONE¹ SOLD OR USED BY PRODUCERS IN 1994, BY USE AND DISTRICT²

(Thousand metric tons and thousand dollars)

Use	District 2		District 3	
	Quantity	Value	Quantity	Value
Construction aggregates:				
Coarse aggregate (+1 1/2 inch) ³	1,250	5,930	650	3,650
Coarse aggregate, graded ⁴	10,000	51,000	8,730	46,200
Fine aggregate (-3/8 inch) ⁵	2,250	10,900	2,050	13,800
Coarse and fine aggregate ⁶	9,420	42,000	5,890	32,500
Other construction materials	640	3,300	40	225
Agricultural ⁷	W	W	W	W
Chemical and metallurgical ⁸	W	W	W	W
Special ⁹	W	W	W	W
Other miscellaneous uses ¹⁰	2,460	16,400	1,560	16,600
Unspecified ¹¹				
Actual	1,330	6,840	683	3,860
Estimated	1,070	5,500	1,170	6,630
Total	28,400	142,000	20,800	124,000

W Withheld to avoid disclosing company proprietary data; included with "Other miscellaneous uses."

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

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

³Includes filter stone, macadam, riprap and jetty stone, and other coarse aggregate.

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

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

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

⁷Includes agricultural limestone, poultry grit and mineral food, and other agricultural uses.

⁸Includes cement manufacture, glass manufacture, lime manufacture, and sulfur oxide removal.

⁹Includes asphalt fillers or extenders, mine dusting or acid water treatment, other fillers or extenders, and whiting or whiting substitute.

¹⁰Includes other specified uses not listed.

¹¹Includes production reported without a breakdown by end use and estimates for nonrespondents.

TABLE 5

TENNESSEE: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1994, BY MAJOR USE CATEGORY¹

Use	Quantity (thousand metric tons)	Value (thousands)	Value per ton
Concrete aggregate (including concrete sand)	3,310	\$14,500	\$4.40
Plaster and gunite sands	122	687	5.63
Concrete products (blocks, brick, pipe, decorative, etc.)	309	1,410	4.57
Asphaltic concrete aggregates and other bituminous mixtures	1,410	7,090	5.05
Road base and coverings ²	1,570	5,470	3.49
Fill	126	432	3.43
Other ³	37	288	7.78
Unspecified: ⁴			
Actual	542	2,370	4.38
Estimated	1,300	5,700	4.40
Total or average	8,710	38,000	4.36

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

²Includes road and other stabilization (cement) and snow and ice control.

³Includes filtration and roofing granules.

⁴Includes production reported without a breakdown by end use and estimates for nonrespondents.

TABLE 6

TENNESSEE: CONSTRUCTION SAND AND GRAVEL¹ SOLD OR USED IN 1994, BY USE AND DISTRICT²

(Thousand metric tons and thousand dollars)

Use	District 1		District 2	
	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products ³	2,320	9,110	1,420	7,520
Asphaltic concrete aggregates and road base materials ⁴	2,350	8,360	749	4,630
Other miscellaneous uses ⁵	—	—	37	289
Unspecified: ⁶				
Actual	360	1,420	182	953
Estimated	974	3,980	322	1,730
Total	6,010	22,900	2,710	15,100

¹Production reported in District 3 was included with "District 2" to avoid disclosing company proprietary data.

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

³Includes plaster and gunite sands.

⁴Includes fill, road and other stabilization (cement), and snow and ice control.

⁵Includes filtration and roofing granules.

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



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