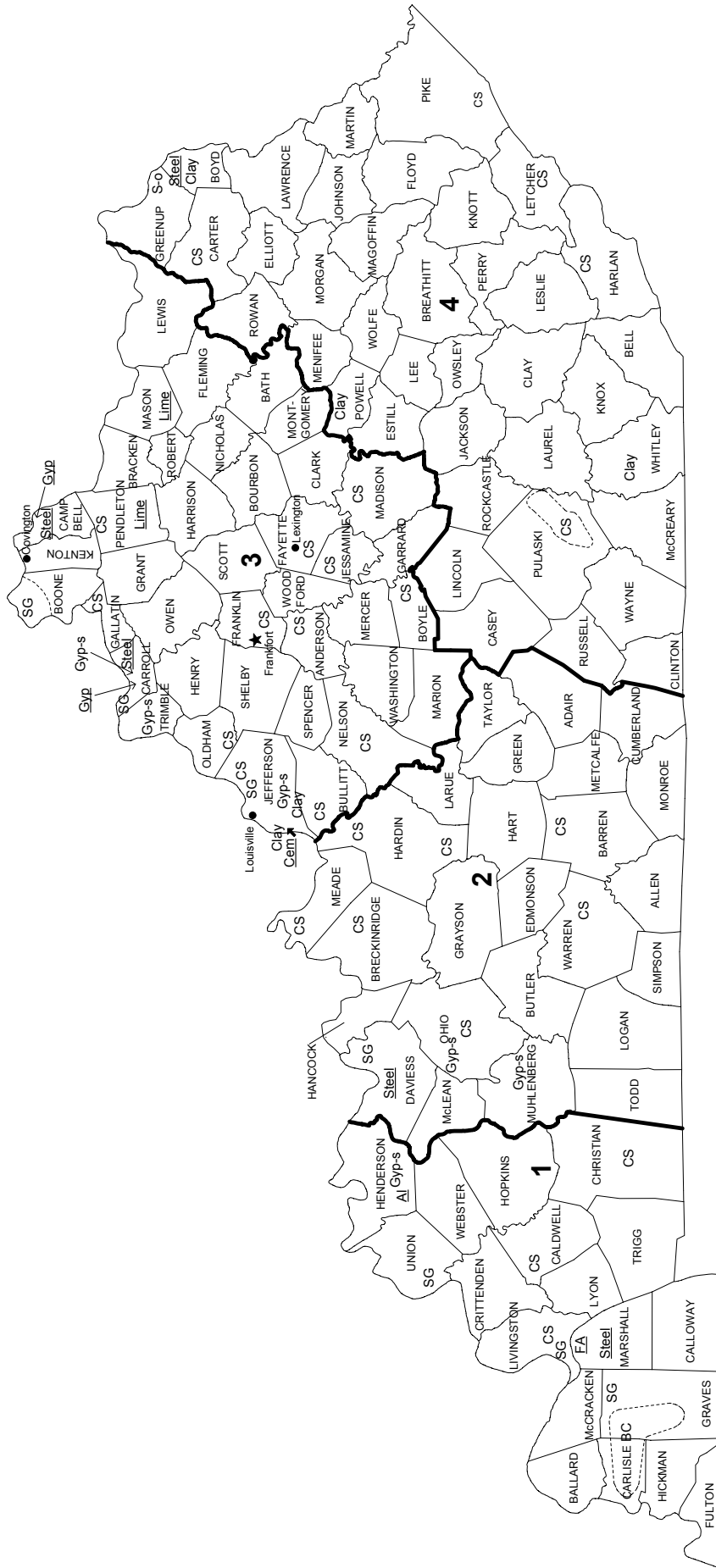


# KENTUCKY



## LEGEND

MINERAL SYMBOL (Major producing areas)	
—	County boundary
★	Capital
•	City
1	Crushed stone/sand and gravel districts
Al	Aluminum plant
BC	Ball clay
Cem	Cement plant
Clay	Common clay
CS	Crushed stone
FA	Ferrous plant
Gyp	Gypsum plant
Gyp-s	Synthetic gypsum
Lime	Lime plant
S-o	Sulfur (oil)
SG	Construction sand and gravel
Steel	Steel plant
(Dashed circle)	Concentration of mineral operations

Source: Kentucky Geological Survey/U.S. Geological Survey (2000)

# THE MINERAL INDUSTRY OF KENTUCKY

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

In 2001, the estimated value<sup>1</sup> of nonfuel mineral production for Kentucky was \$531 million, based upon preliminary U.S. Geological Survey (USGS) data. This was about a 6% increase from that of 2000<sup>2</sup> and followed a marginal decrease in 2000 from 1999. The State rose to 26th from 29th in rank among the 50 States in total nonfuel mineral production value, of which Kentucky accounted for about 1.5% of the U.S. total.

Crushed stone continued as Kentucky's leading nonfuel mineral commodity in 2001 and accounted for nearly 60% of the State's raw nonfuel mineral production value. Lime was second, and portland cement was third.

In 2001, a very substantial increase in the production and value of portland cement along with a significant increase in crushed stone (table 1) accounted for nearly all the State's increase in mineral value. The value of gemstones was also up slightly. Decreases in construction sand and gravel, lime, and ball clay production values (descending order of change) somewhat moderated the increase for the year (table 1).

In 2000, decreases in the values of crushed stone, down \$12 million, and portland cement, down more than \$8 million, offset the increased values of lime and ball clay, which were up a combined \$16 million, and construction sand and gravel, up almost \$4 million, resulting in the small net decrease for the year. Small decreases also occurred in gemstones and masonry cement.

Compared with USGS estimates of the quantities produced in the other 49 States during 2001, Kentucky remained third of four ball-clay-producing States and eighth in common clay, and it dropped to fourth from second in lime. Additionally, the State produced significant quantities of crushed stone and portland cement. Primary aluminum and raw steel were produced from materials obtained from other domestic and foreign sources.

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<sup>1</sup>The terms "nonfuel mineral production" and related "values" encompass variations in meaning, depending upon 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 2001 USGS mineral production data published in this chapter are preliminary estimates as of August 2002 and are expected to change. For some mineral commodities, such as 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. Specialist contact information may be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals/contacts/comdir.html>; alternatively, specialists' names and telephone numbers may be obtained by calling USGS information at (703) 648-4000 or by calling the USGS Earth Science Information Center at 1-888-ASK-USGS (275-8747). All Mineral Industry Surveys—mineral commodity, State, and country—also may be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals>.

<sup>2</sup>Values, percentage calculations, and rankings for 2000 may differ from the Minerals Yearbook, Area Reports: Domestic 2000, Volume II, owing to the revision of preliminary 2000 to final 2000 data. Data for 2001 are preliminary and are expected to change; related rankings may also change.

Based upon USGS annual data, Kentucky became the Nation's leading producer of primary aluminum (second in 2000).

The following narrative information was provided by the Kentucky Geological Survey (KGS).<sup>3</sup> On September 21, 2001, the Governor of Kentucky issued an executive order that established a moratorium on the issuance of new permits for noncoal mineral operations in the Commonwealth and that directed a review of permits and laws regarding oil and gas wells in the Pine Mountain area of southeastern Kentucky. Suspension of the issuance of new permits extends through July 15, 2002. The executive order, among other things, directed the Cabinet for Natural Resources and Environmental Protection to review all current laws and regulations related to reclamation of noncoal mining and excavation activity. It also directed the Transportation Cabinet to study any increase in the cost of highway construction materials that may result from proposed reclamation requirements (Patton, 2001).

A new quarry was opened in the Louisville metropolitan area. The operation of Brooks Crushed Stone, LLC was in northern Bullitt County. Burton Stone, Inc. also opened a quarry in Adair County of south-central Kentucky (Kentucky Crushed Stone Association, 2001).

The Kentucky Economic Development Finance Authority approved a \$240,000 loan for a new limestone processor in Breckinridge County. Bedrock Products, LLC planned to hire 24 workers to crush and process limestone that will be stained in several colors and coated with acrylic polymer. The product will be marketed for home and commercial landscaping (Jordan, 2001).

Imerys USA, Inc. purchased the Kentucky-Tennessee Clay Co. from Hecla Mining Co. The purchase included ball clay operations in western Kentucky (Industrial Minerals, 2001).

In March, the NS Group, Inc. announced a cutback in steelmaking operations at Kentucky and Pennsylvania plants. It will stop manufacturing steel and hot-rolled coils at its Newport Steel facility in Wilder, KY, eliminating 300 jobs (Associated Press, 2001). In May, the Southwire Co. announced that it will reduce the workforce at its Hawesville aluminum plant by 27 jobs (Courier-Journal, 2001).

## References Cited

- Associated Press, 2001, NS Group to lay off 300 workers in Kentucky: Lexington (KY) Herald-Leader, March 30, p. B5-B6.  
Courier-Journal, 2001, Southwire plant to cut 27 jobs: Courier-Journal (Louisville), May 9, p. D1.  
Industrial Minerals, 2001, Imerys to rescue Hecla with \$62.5m. K-T Clay buy: Industrial Minerals, no. 403, April, p. 8.  
Jordan, Jim, 2001, State panel oks loan for limestone processor: Lexington (KY) Herald-Leader, January 26, p. B10.

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<sup>3</sup>Garland R. Dever, Jr., Geologist, submitted the text of information provided by the KGS.

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

(Thousand metric tons and thousand dollars)

Mineral	1999		2000		2001 p/	
	Quantity	Value	Quantity	Value	Quantity	Value
Clays:						
Common	892	3,790	1,000	4,190	1,000	4,190
Fire	W	W	10	35	9	35
Gemstones	NA	292	NA	47	NA	64
Sand and gravel, construction	9,620	32,400	11,000	36,000	8,500	28,300
Stone, crushed 3/	59,800 r/	308,000 r/	55,600	296,000	57,600	316,000
Combined values of cement, clays (ball), lime	XX	158,000	XX	164,000	XX	183,000
Total	XX	502,000	XX	501,000	XX	531,000

p/ Preliminary. r/ Revised. 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 no more than three significant digits; may not add to totals shown.

3/ Excludes certain stones; kind and value included with "Combined values" data.

TABLE 2  
KENTUCKY: CRUSHED STONE SOLD OR USED BY PRODUCERS, BY KIND 1/

Kind	1999				2000			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone	98	W	W	W	95	W	W	W
Sandstone	1	W	W	W	1	W	W	W
Total or average	XX	59,800 r/	\$308,000 r/	\$5.14 r/	XX	55,600	\$296,000	\$5.33

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

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

TABLE 3  
KENTUCKY: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2000, BY USE 1/ 2/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
<b>Construction:</b>			
Coarse aggregate (+1 1/2 inch):			
Macadam	W	W	\$3.00
Riprap and jetty stone	435	\$2,700	6.21
Filter stone	411	2,430	5.91
Other coarse aggregate	1,670	8,400	5.04
Total or average	2,510	13,500	5.38
Coarse aggregate, graded:			
Concrete aggregate, coarse	2,330	13,200	5.69
Bituminous aggregate, coarse	3,240	20,500	6.33
Bituminous surface-treatment aggregate	449	2,890	6.43
Railroad ballast	76	359	4.72
Other graded coarse aggregate	5,940	30,900	5.19
Total or average	12,000	67,800	5.64
Fine aggregate (-3/8 inch):			
Stone sand, concrete	274	1,290	4.72
Stone sand, bituminous mix or seal	943	5,400	5.73
Screening, undesignated	605	2,890	4.78
Other fine aggregate	1,960	9,850	5.03
Total or average	3,780	19,400	5.14
Coarse and fine aggregate:			
Graded road base or subbase	3,600	19,500	5.42
Unpaved road surfacing	2,330	10,200	4.37
Terrazzo and exposed aggregate	W	W	4.86
Crusher run or fill or waste	440	1,830	4.16
Other coarse and fine aggregates	3,450	16,600	4.82
Total or average	9,820	48,100	4.90
Other construction materials	(3/)	(3/)	3.86
Agricultural limestone	(3/)	(3/)	4.29
Chemical and metallurgical:			
Cement manufacture	(3/)	(3/)	3.49
Lime manufacture	3,960	34,500	8.71
Flux stone	628	2,520	4.01
Special, mine dusting or acid water treatment	(3/)	(3/)	26.74
Other miscellaneous uses, pipe bedding	(3/)	(3/)	5.00
Unspecified: 4/			
Reported	12,600	61,400	4.88
Estimated	7,700	38,000	4.96
Total or average	20,300	99,700	4.91
Grand total or average	55,600	296,000	5.33

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

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

2/ Includes dolomite and limestone.

3/ Withheld to avoid disclosing company proprietary data, included in "Grand total or average."

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

TABLE 4  
KENTUCKY: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2000, BY USE AND DISTRICT 1/

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3		District 4	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Construction:								
Coarse aggregate (+1 1/2 inch) 2/	W	W	W	W	466	2,940	905	4,730
Coarse aggregate, graded 3/	W	W	W	W	3,490	22,800	3,990	19,400
Fine aggregate (-3/8 inch) 4/	W	W	W	W	1,200	5,870	1,130	5,700
Coarse and fine aggregate 5/	W	W	W	W	4,960	25,300	1,650	7,600
Other construction materials	--	--	--	--	W	W	W	W
Agricultural 6/	W	W	401	1,490	234	1,250	W	W
Chemical and metallurgical 7/	--	--	W	W	W	W	--	--
Special 8/	--	--	--	--	W	W	--	--
Other miscellaneous uses 9/	--	--	--	--	--	--	W	W
Unspecified: 10/								
Reported	8,060	39,300	45	186	3,850	19,000	635	2,980
Estimated	400	2,000	2,900	14,000	2,000	9,900	2,400	12,000
Total	13,600	70,600	9,940	46,000	21,200	127,000	10,800	52,700

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

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

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

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

6/ Includes agricultural limestone.

7/ Includes cement manufacture, flux stone, and lime manufacture.

8/ Includes mine dusting or acid water treatment.

9/ Includes pipe bedding.

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

TABLE 5  
KENTUCKY: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2000,  
BY MAJOR USE CATEGORY 1/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate and concrete products	1,760	\$6,220	\$3.54
Asphaltic concrete aggregates and road base materials	176	880	5.00
Fill 2/	209	673	3.22
Other miscellaneous uses	7	104	14.86
Unspecified: 3/			
Reported	1,220	3,330	2.73
Estimated	7,600	25,000	3.26
Total or average	11,000	36,000	3.28

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 6  
 KENTUCKY: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2000, BY USE AND DISTRICT 1/ 2/

(Thousand metric tons and thousand dollars)

Use	Districts 1 and 2		Districts 3 and 4	
	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products	W	W	W	W
Asphaltic concrete aggregates and road base materials	W	W	W	W
Other miscellaneous uses 2/	1,290	4,100	2,080	7,110
Unspecified: 3/				
Reported	W	W	W	W
Estimated	4,400	14,000	3,200	11,000
Total	5,690	17,800	5,300	18,300

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

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

2/ Includes fill and snow and ice control.

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