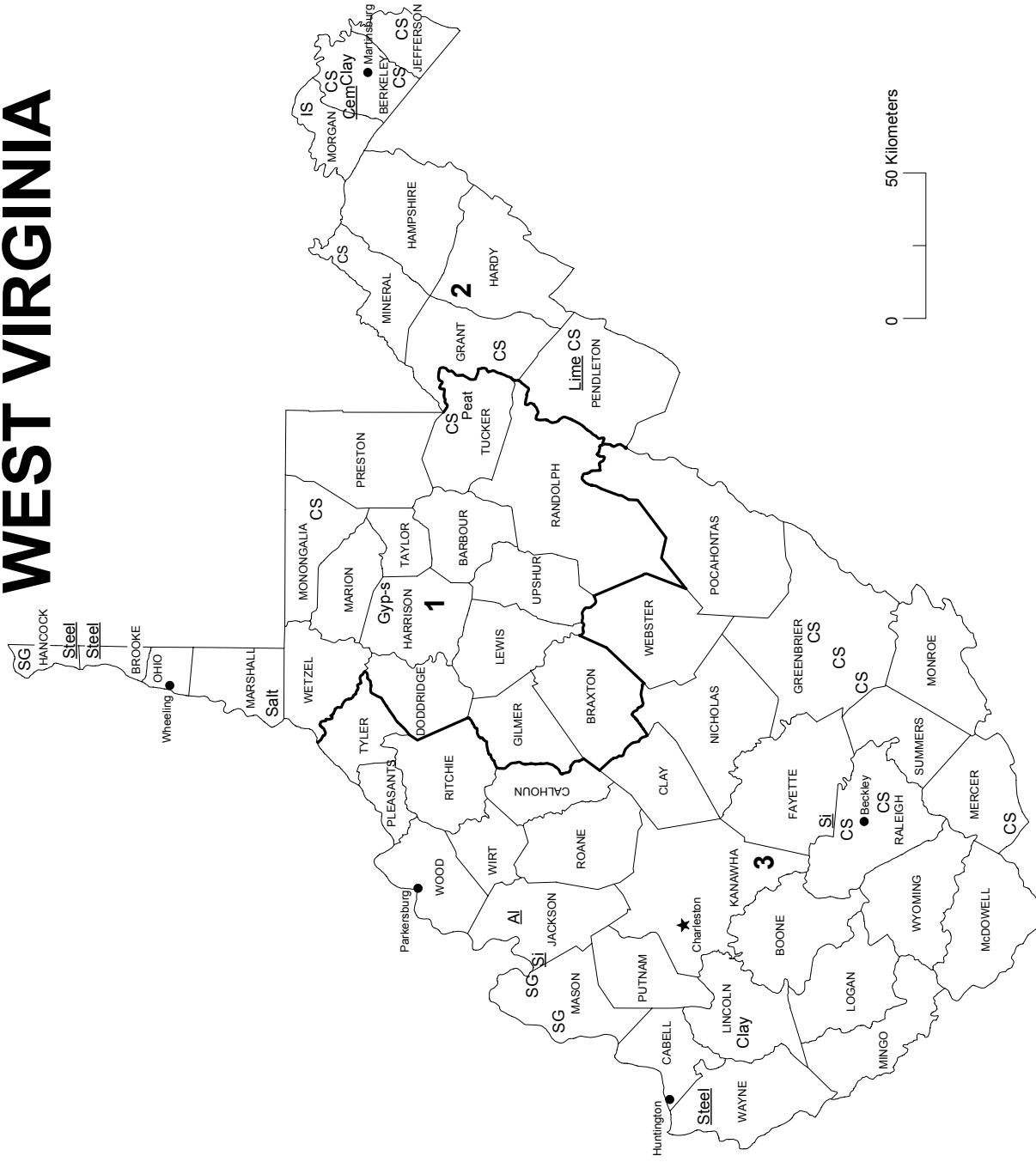


# WEST VIRGINIA



## LEGEND

- County boundary
- ★ Capital
- City
- 1 — Crushed stone/sand and gravel districts

## MINERAL SYMBOLS (Major producing areas)

- Al Aluminum plant
- Cem Cement plant
- Clay Common clay
- CS Crushed stone
- Gyp-s Synthetic gypsum
- IS Industrial sand
- Lime Lime plant
- Peat Peat
- Salt Salt
- SG Construction sand and gravel
- Si Silicon metal plant
- Steel Steel plant

# THE MINERAL INDUSTRY OF WEST VIRGINIA

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

In 2001, the estimated value<sup>1</sup> of nonfuel mineral production for West Virginia was \$185 million, based upon preliminary U.S. Geological Survey (USGS) data. This was a 7.5% increase from that of 2000<sup>2</sup> and followed a marginal increase from 1999 to 2000. In 2001, crushed stone continued to be West Virginia's leading nonfuel mineral by value, representing approximately 35% of the State's total nonfuel mineral production value. Cement (portland and masonry), industrial sand and gravel, lime,

and salt, in descending order of value, followed. These five mineral commodities accounted for nearly 90% of the State's same total value.

Crushed stone followed by cement led West Virginia's increase in nonfuel mineral value in 2001, rising more than \$12 million and nearly \$5 million, respectively. All other mineral commodities decreased by about \$1 million or less or were unchanged. In 2000, increases of nearly \$6 million in crushed dolomite, \$2.5 million in industrial sand and gravel, plus smaller increases in construction sand and gravel, lime, and dimension sandstone (descending order of change) balanced out the decreases that occurred in crushed stone, down \$3.7 million, cement, down more than \$3 million, plus smaller drops in salt and common clay, resulting in the net increase of the year (table 1).

Based upon USGS estimates of the quantities of minerals produced in the 50 States in 2001, West Virginia decreased to 10th from 9th in the production of salt; the State also produced significant quantities of crushed stone, cement, and industrial sand and gravel (descending order of value). West Virginia mines produced only industrial minerals and coal; no metals were mined in the State. Primary aluminum and raw steel were produced in West Virginia, but both metals were processed from materials acquired from foreign and other domestic sources. In 2001, West Virginia, for the second consecutive year, was 10th in the Nation in the production of primary aluminum.

<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 vary 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.

TABLE 1  
NONFUEL RAW MINERAL PRODUCTION IN WEST VIRGINIA 1/ 2/

(Thousand metric tons and thousand dollars)

Mineral	1999		2000		2001 p/	
	Quantity	Value	Quantity	Value	Quantity	Value
Clays, common	336	813	199	560	199	560
Gemstones	NA	1	NA	1	NA	1
Sand and gravel, construction	1,850	9,030	1,980	9,800	1,780	8,930
Stone, crushed 3/	12,500 r/	56,500 r/	12,100	52,800	14,500	65,400
Combined values of cement, lime, peat, sand and gravel (industrial), stone (crushed dolomite and dimension sandstone)	XX	104,000	XX	109,000	XX	110,000
Total	XX	171,000	XX	172,000	XX	185,000

p/ Preliminary. r/ Revised. NA Not available. XX Not applicable.

1/ Production as measured by mine shipments 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  
WEST VIRGINIA: 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	31 r/	11,400 r/	\$51,500 r/	\$4.50 r/	29	10,900	\$47,000	\$4.33
Dolomite	1	W	W	W	2	W	W	W
Sandstone	10	1,020	4,990	4.92	9	1,210	5,810	4.79
Total or average	XX	12,500 r/	56,500 r/	4.54 r/	XX	12,100	52,800	4.38

r/ Revised. W Withheld from total to avoid disclosing company proprietary data. XX Not applicable.  
1/ Data are rounded to no more than three significant digits; may not add to totals shown.

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

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Construction:			
Coarse aggregate (+1 1/2 inch):			
Macadam	77	\$383	\$4.97
Riprap and jetty stone	61	450	7.38
Filter stone	W	W	9.86
Other coarse aggregate	200	799	4.00
Coarse aggregate, graded:			
Concrete aggregate, coarse	147	682	4.64
Bituminous aggregate, coarse	W	W	4.49
Bituminous surface-treatment aggregate	W	W	6.67
Other graded coarse aggregate	734	2,920	3.98
Fine aggregate (-3/8 inch):			
Stone sand, concrete	W	W	8.80
Stone sand, bituminous mix or seal	W	W	6.67
Screening, undesignated	W	W	4.65
Other fine aggregate	437	1,940	4.44
Coarse and fine aggregates:			
Graded road base or subbase	347	1,730	4.97
Unpaved road surfacing	241	1,300	5.37
Crusher run or fill or waste	108	396	3.67
Other coarse and fine aggregate	113	406	3.59
Other construction materials	148	909	6.14
Agricultural, agricultural limestone	(3/)	(3/)	11.67
Chemical and metallurgical, cement manufacture	(3/)	(3/)	3.42
Special, mine dusting or acid water treatment	(3/)	(3/)	27.27
Unspecified: 4/			
Reported	6,960	30,700	4.42
Estimated	1,300	5,100	4.02
Total or average	12,100	52,800	4.38

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 limestone and sandstone; excludes dolomite from State total to avoid disclosing company proprietary data.

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

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

TABLE 4  
WEST VIRGINIA: 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	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1 1/2 inch) 2/	W	W	98	488	W	W
Coarse aggregate, graded 3/	455	1,820	W	W	W	W
Fine aggregate (-3/8 inch) 4/	327	1,510	W	W	W	W
Coarse and fine aggregate 5/	W	W	W	W	451	1,990
Other construction materials	26	437	--	--	122	472
Agricultural 6/	--	--	W	W	--	--
Chemical and metallurgical 7/	--	--	W	W	--	--
Special 8/	W	W	--	--	--	--
Unspecified: 9/						
Reported	4,000	17,600	829	3,650	2,130	9,450
Estimated	270	960	430	1,900	550	2,200
Total	5,430	24,900	2,990	12,100	3,640	15,900

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), and other graded coarse aggregate.

4/ Includes screening (undesigned), 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, unpaved road surfacing, and other coarse and fine aggregate.

6/ Includes agricultural limestone.

7/ Includes cement manufacture.

8/ Includes mine dusting or acid water treatment.

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

TABLE 5  
WEST VIRGINIA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2000,  
BY MAJOR USE CATEGORY 1/ 2/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate and concrete products	W	W	\$4.40
Road stabilization (lime)	W	W	3.50
Fill	W	W	4.48
Other miscellaneous uses	232	\$759	3.27
Unspecified: 3/			
Reported	1,690	8,550	5.06
Estimated	64	240	3.67
Total or average	1,980	9,800	4.94

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

1/ To avoid disclosing company proprietary data, no district tables were produced for 2000.

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

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