

# 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 2000, the estimated value<sup>1</sup> of nonfuel mineral production for West Virginia was \$182 million, based upon preliminary U.S. Geological Survey (USGS) data. This was a 5.2% increase from that of 1999<sup>2</sup> and followed a 1.8% increase from 1998 to 1999.

In 2000, crushed stone continued to be West Virginia's leading nonfuel mineral by value, representing approximately 36% of the State's total nonfuel mineral production value.

<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 2000 USGS mineral production data published in this chapter are preliminary estimates as of July 2001 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. A telephone listing of the specialists may be retrieved over the Internet at URL <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 URL <http://minerals.usgs.gov/minerals>; facsimile copies may be obtained from MINES FaxBack.

<sup>2</sup>Values, percentage calculations, and rankings for 1999 may vary from the Minerals Yearbook, Area Reports: Domestic 1999, Volume II, owing to the revision of preliminary 1999 to final 1999 data. Data for 2000 are preliminary and are expected to change; related rankings may also change.

Portland cement, industrial sand and gravel, lime, and salt, in descending order of value, followed. These top five mineral commodities accounted for about 90% of the State's same total value. Crushed stone followed by industrial sand and gravel led the West Virginia's increase in nonfuel mineral value in 2000, rising more than \$6 million and nearly \$3 million, respectively. All other mineral commodities decreased by about half that of industrial sand and gravel or less or were unchanged. In 1999, nearly all of the State's nonfuel minerals increased in both production and value, led by a more than \$10 million rise in cement (masonry and portland) and smaller yet significant increases in industrial sand and gravel and construction sand and gravel (descending order of change). These gains were offset in part by a drop in the value of crushed stone. Although crushed stone production increased by about 6%, the mineral commodity brought in about \$9.6 million less to the State's mineral economy; lime was also down slightly (table 1).

Based upon USGS estimates of the quantities of minerals produced in the 50 States in 2000, West Virginia remained ninth in the production of salt; the State also produced significant quantities of cement, crushed stone, and industrial sand and gravel. 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 2000, West Virginia rose in rank to 10th from 13th in the Nation in the production of primary aluminum.

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

(Thousand metric tons and thousand dollars)

Mineral	1998		1999		2000 p/	
	Quantity	Value	Quantity	Value	Quantity	Value
Clays, common	231	515	336	813	336	813
Gemstones	NA	1	NA	1	NA	1
Sand and gravel, construction	1,650	8,050	1,850	9,030	1,490	7,400
Stone, crushed 3/	12,300	68,100	13,000	58,500	14,000	64,700
Combined values of cement, lime, peat, salt, sand and gravel (industrial), stone (crushed dolomite and dimension sandstone)	XX	93,000	XX	104,000	XX	109,000
Total	XX	170,000	XX	173,000	XX	182,000

p/ Preliminary. 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	1998				1999			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone	38	11,300	\$61,400	\$5.45	43	12,000	\$53,500	\$4.47
Dolomite	1	W	W	W	1	W	W	W
Sandstone	9	1,020	6,710	6.57	10	1,020	4,990	4.92
Total or average	XX	12,300	68,100	5.55	XX	13,000	58,500	4.50

W Withheld 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 1999, BY USE 1/ 2/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
<u>Construction:</u>			
<u>Coarse aggregate (+1 1/2 inch):</u>			
Riprap and jetty stone	26	\$263	\$10.12
Filter stone	W	W	W
<u>Coarse aggregate, graded:</u>			
Concrete aggregate, coarse	(3/)	(3/)	(3/)
Bituminous aggregate, coarse	(3/)	(3/)	(3/)
Bituminous surface-treatment aggregate	(3/)	(3/)	(3/)
Other graded coarse aggregate	273	1,370	5.00
<u>Fine aggregate (-3/8 inch):</u>			
Stone sand, concrete	(3/)	(3/)	(3/)
Stone sand, bituminous mix or seal	(3/)	(3/)	(3/)
Screening, undesignated	(3/)	(3/)	(3/)
Other fine aggregate	81	584	7.21
<u>Coarse and fine aggregates:</u>			
Graded road base or subbase	139	807	5.81
Unpaved road surfacing	(3/)	(3/)	(3/)
Crusher run or fill or waste	42	164	3.90
Other coarse and fine aggregates	173	1,030	5.93
Agricultural, agricultural limestone	W	W	W
Chemical and metallurgical, cement manufacture	W	W	W
Special, mine dusting or acid water treatment	W	W	W
<u>Unspecified: 4/</u>			
Reported	7,920	40,600	5.12
Estimated	3,100	4,000	4.44
Total or average	13,000	58,500	4.50

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

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 total to avoid disclosing company proprietary data.

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

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

TABLE 4  
WEST VIRGINIA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 1999,  
BY USE AND DISTRICT 1/ 2/

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
<b>Construction:</b>						
Coarse aggregate (+1 1/2 inch) 3/	W	W	W	W	W	W
Coarse aggregate, graded 4/	W	W	W	W	--	--
Fine aggregate (-3/8 inch) 5/	W	W	--	--	W	W
Coarse and fine aggregate 6/	235	1,280	W	W	W	W
Agricultural 7/	--	--	W	W	--	--
Chemical and metallurgical 8/	--	--	W	W	--	--
Special 9/	--	--	W	W	--	--
<b>Unspecified: 10/</b>						
Reported	4,250	19,600	958	4,310	2,710	12,200
Estimated	1,500	6,800	600	2,700	940	4,200
<b>Total</b>	<b>6,250</b>	<b>28,900</b>	<b>3,030</b>	<b>12,600</b>	<b>3,730</b>	<b>17,100</b>

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/ Excludes dolomite from total to avoid disclosing company proprietary data.

3/ Includes filter stone and riprap and jetty stone.

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

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

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

7/ Includes agricultural limestone.

8/ Includes cement manufacture.

9/ Includes mine dusting or acid water treatment.

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

TABLE 5  
WEST VIRGINIA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1999,  
BY MAJOR USE CATEGORY 1/ 2/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate and concrete products	228	\$977	\$4.29
Asphaltic concrete aggregates and other bituminous mixtures	2	26	13.00
Fill	153	572	3.74
<b>Unspecified: 3/</b>			
Reported	1,440	7,320	5.08
Estimated	28	140	5.00
<b>Total or average</b>	<b>1,850</b>	<b>9,030</b>	<b>4.88</b>

1/ To avoid disclosing company proprietary data, no district tables were produced for 1999.

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

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