

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 1999, the preliminary estimated value¹ of nonfuel mineral production for West Virginia was \$180 million, according to the U.S. Geological Survey (USGS). This was about a 6% increase from that of 1998,² and followed a 17.1% decrease from 1997 to

¹The 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 1999 USGS mineral production data published in this chapter are preliminary estimates as of May 2000, 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 for 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.

²Values, percentage calculations, and rankings for 1998 may vary from the Minerals Yearbook, Area Reports: Domestic 1998, Volume II, owing to the revision of preliminary 1998 to final 1998 data. Data for 1999 are preliminary and are expected to change; related rankings may also be subject to change.

1998.

Crushed stone was West Virginia's leading nonfuel mineral by value and represented 42% of the State total. Portland cement, industrial sand and gravel, lime, and salt, in descending order of value, followed. These top five mineral commodities accounted for 89% of the State's total nonfuel mineral production value. In 1999, a \$7 million increase in the value of crushed stone and a more than \$2 million rise in the value of construction sand and gravel led the State's increase. The large majority of the drop in value in 1998 resulted from decreases in crushed stone and masonry and portland cement (table 1).

Based upon USGS estimates of the quantities of minerals produced in the 50 States in 1999, West Virginia remained 9th in 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 1999, West Virginia ranked 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	1997		1998		1999 p/	
	Quantity	Value	Quantity	Value	Quantity	Value
Clays: Common	151	323	231	515	234	513
Gemstones	NA	1	NA	1	NA	1
Sand and gravel: Construction	1,670	8,010	1,650	8,050	2,080	10,400
Stone: Crushed 3/	12,900	76,700	12,300	68,100	13,200	75,100
Combined values of cement, lime, peat, salt, sand gravel (industrial), stone (crushed dolomite dimension sandstone)	XX	120,000	XX	93,000	XX	93,700
Total	XX	205,000	XX	170,000	XX	180,000

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	1997				1998			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone	38	12,000	\$70,500	\$5.86	38	11,300	\$61,400	\$5.45
Dolomite	1	(2/)	(2/)	(2/)	1	(2/)	(2/)	(2/)
Sandstone	8	856	6,180	7.22	9	1,020	6,710	6.57
Total or average	XX	12,900	76,700	5.95	XX	12,300	68,100	5.55

XX Not applicable.

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

2/ Withheld to avoid disclosing company proprietary data.

TABLE 3
WEST VIRGINIA: CRUSHED STONE SOLD OR USED BY PRODUCERS
IN 1998, BY USE 1/ 2/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Coarse aggregate (+1 1/2 inch):			
Riprap and jetty stone	126	\$798	\$3.96
Filter stone	172	982	5.71
Other coarse aggregate	78	475	6.09
Coarse aggregate, graded:			
Concrete aggregate, coarse	648	4,020	6.21
Bituminous aggregate, coarse	417	2,610	6.25
Bituminous surface-treatment aggregate	378	2,190	5.79
Railroad ballast	12	58	4.83
Other graded coarse aggregate	41	288	7.02
Fine aggregate (-3/8 inch):			
Stone sand, concrete	130	881	6.78
Stone sand, bituminous mix or seal	378	2,180	5.78
Screening, undesignated	49	286	5.84
Other fine aggregate	3	12	4.00
Coarse and fine aggregates:			
Graded road base or subbase	402	2,120	5.27
Unpaved road surfacing	127	712	5.61
Terrazzo and exposed aggregate	W	W	4.49
Crusher run or fill or waste	615	2,990	4.86
Other coarse and fine aggregates	418	2,570	6.14
Other construction materials	6	21	3.50
Agricultural limestone	(3/)	(3/)	9.18
Chemical and metallurgical: Cement manufacture	(3/)	(3/)	3.31
Special: Mine dusting or acid water treatment	(3/)	(3/)	23.63
Other miscellaneous uses:			
Abrasives	W	W	6.50
Waste material	W	W	3.84
Other specified uses not listed	15	76	5.07
Unspecified: 4/			
Actual	5,450	30,700	5.64
Estimated	1,570	8,490	5.41
Total or average	12,300	68,100	5.55

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

2/ Includes limestone and sandstone; dolomite withheld from "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 1998,
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
Construction aggregates:						
Coarse aggregate (+1 1/2 inch) 3/	W	W	34	181	W	W
Coarse aggregate, graded 4/	259	1,410	301	2,300	936	5,450
Fine aggregate (-3/8 inch) 5/	171	947	37	239	351	2,180
Coarse and fine aggregate 6/	409	2,280	330	1,620	822	4,490
Other construction materials	--	--	W	W	W	W
Agricultural 7/	--	--	W	W	W	W
Chemical and metallurgical 8/	--	--	W	W	--	--
Special 9/	W	W	W	W	--	--
Other miscellaneous uses 10/	W	W	W	W	W	W
Unspecified: 11/						
Actual	3,010	17,100	1,460	8,420	973	5,170
Estimated	976	5,280	100	551	494	2,670
Total	5,010	29,400	3,460	17,300	3,810	21,400

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/ Dolomite withheld from "Total" to avoid disclosing company proprietary data.

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

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

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

6/ Includes crusher run (select material or fill), graded road base or subbase, terrazzo and exposed aggregate, 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/ Includes abrasives, waste material, and other specified uses not listed.

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

TABLE 5
WEST VIRGINIA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1998,
BY MAJOR USE CATEGORY 1/ 2/

Use	Quantity	Value	Unit
	(thousand metric tons)	(thousands)	value
Concrete aggregate	W	W	\$7.40
Fill	W	W	3.00
Other miscellaneous uses	38	\$209	5.50
Unspecified: 3/			
Actual	1,610	7,840	4.87
Estimated	W	W	4.89
Total or average	1,650	8,050	4.89

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 1998.

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.