

THE MINERAL INDUSTRY OF MARYLAND

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 Maryland Geological Survey for collecting information on all nonfuel minerals.

Maryland ranked 35th among the 50 States in total nonfuel mineral value,¹ down from 32d in 1993, according to the U.S. Bureau of Mines (USBM). The estimated value for 1994 was \$325 million, a 4% increase over that of 1993. This followed a 7.5% decrease from that of 1992. The State accounted for 1% of the U.S. total value. Crushed stone remained Maryland's leading nonfuel mineral commodity, accounting for more than 52% of the State's nonfuel mineral value, followed by portland cement, 24%; and construction sand and gravel, 22%. Changes in the State's total mineral value during the past 2 years mainly resulted from changes in the crushed stone marketplace, while several other mineral commodities had similar changes but with less overall impact. Compared with 1993, the mineral commodity values for crushed stone, masonry cement, and common clays increased. Decreases occurred for portland cement, construction sand and gravel, and dimension stone.

In a comparison of USBM estimates of the quantities of minerals produced in the United States during 1994, Maryland ranked 16th in the production of both portland and masonry cements. In addition, the State's mines produced significant quantities of crushed stone, dimension stone, construction sand and gravel, and common clays. All nonfuel minerals mined in the State of Maryland were industrial minerals. All metals produced in the State, mostly primary aluminum and raw steel, were processed from materials received from both foreign and domestic

sources. Based on preliminary figures for both metals, Maryland was seventh in the Nation in the production of primary aluminum and eighth in raw steel production.

According to the Maryland Geological Survey, in 1994, there was no significant legislation related to nonfuel mining and mineral production. However, a court challenge to a 1991 mining law was brought before the Maryland Court of Appeals (*Maryland Aggregates Association, Inc., et al. v. State of Maryland, et al.*). The plaintiff association had obtained a restraining order halting execution of the law until the case was settled, so the law had not yet become effective. This law authorized the Maryland Department of Natural Resources to delineate a zone of dewatering influence around quarries in karst (cavernous or potentially collapsible limestone) terranes. The law assigned liability to the permittee for water wells within the zone of dewatering where land surface failures occurred because of declining water levels, and for property damage within the zone that resulted from the sudden subsidence of the land surface, unless "...the permittee demonstrates...by clear and convincing evidence that the proximate cause of the loss of water supply or property damage is not the result of pit dewatering." Although challenged on numerous constitutional grounds, a State Circuit Court upheld the law in 1994. The decision was appealed to the State's highest court, the Court of Appeals, which upheld the ruling of the Circuit Court. The plaintiffs were expected to appeal the decision to the U.S. Supreme

TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN MARYLAND¹

Mineral	1992		1993		1994 ^a	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
Cement (portland) thousand metric tons	1,514	\$84,191	1,634	\$81,639	1,540	\$77,000
Clays do.	227	980	294	705	254	731
Gemstones	NA	1	NA	1	—	—
Sand and gravel (construction) thousand metric tons	10,875	69,297	^c 11,200	^c 72,200	10,800	70,200
Stone:						
Crushed do.	^e 21,591	^e 180,400	23,051	152,273	^e 25,000	^e 170,000
Dimension metric tons	^e 10,310	^e 1,024	19,345	2,024	^e 16,600	^e 1,770
Combined value of other industrial minerals	XX	3,473	XX	4,677	XX	4,860
Total	XX	339,366	XX	313,519	XX	² 325,000

^aEstimated. ^bPreliminary. NA Not available. XX Not applicable.

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

²Data do not add to total shown because of independent rounding.

Court.

of nonfuel minerals as represented by either mine shipments, mineral commodity sales, or marketable production as is applicable to the individual mineral commodities.

¹The term value, throughout this document, refers to the monetary value

TABLE 2
MARYLAND: CRUSHED STONE¹ SOLD OR USED BY PRODUCERS IN 1993, BY USE

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Coarse aggregate (+1 1/2 inch):			
Riprap and jetty stone	476	\$3,307	\$6.95
Filter stone	634	4,223	6.66
Other coarse aggregate	W	W	4.96
Coarse aggregate, graded:			
Concrete aggregate, coarse	2,291	14,521	6.34
Bituminous aggregate, coarse	1,392	8,900	6.39
Bituminous surface-treatment aggregate	403	2,355	5.84
Railroad ballast	W	W	5.16
Other graded coarse aggregate	W	W	6.58
Fine aggregate (-3/8 inch):			
Stone sand, concrete	324	2,594	8.01
Stone sand, bituminous mix or seal	494	3,360	6.80
Screening, undesignated	1,156	7,038	6.09
Coarse and fine aggregate:			
Graded road base or subbase	3,106	16,908	5.44
Unpaved road surfacing	W	W	6.13
Terrazzo and exposed aggregate	W	W	7.70
Crusher run or fill or waste	1,892	12,530	6.62
Other coarse and fine aggregate	W	W	4.05
Other construction materials	2,701	16,061	5.95
Roofing granules	W	W	11.52
Agricultural:			
Agricultural limestone	(²)	(²)	7.47
Chemical and metallurgical:			
Cement manufacture	(²)	(²)	2.89
Special:			
Asphalt fillers or extenders	13	82	6.31
Whiting or whiting substitute	(²)	(²)	89.16
Other specified uses not listed	2,723	24,791	9.10
Unspecified:³			
Actual	4,394	28,650	6.52
Estimated	1,051	6,950	6.61
Total ⁴	23,051	152,273	6.61
Total ^{5 6}	25,409	152,273	5.99

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

¹Includes granite, limestone, miscellaneous stone, sandstone, and traprock.

²Withheld to avoid disclosing company proprietary data; included with "Other specified uses not listed."

³Includes production reported without a breakdown by use and estimates for nonrespondents.

⁴Data may not add to totals shown because of independent rounding.

⁵One short ton is equal to 907 kilograms or 2,000 pounds. To convert metric tons to short tons, divide metric tons by 0.907185.

⁶Total shown in thousand short tons and thousand dollars.

TABLE 3
MARYLAND: CRUSHED STONE SOLD OR USED, BY KIND

Kind	1991				1993			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone	19	'13,910	'\$87,894	'\$6.32	21	15,382	\$101,824	\$6.62
Granite	3	5,110	33,155	6.49	4	4,795	28,622	5.97
Traprock	'2	W	W	7.29	1	W	W	6.80
Sandstone	2	W	W	6.03	4	187	1,395	7.46
Miscellaneous stone	2	W	W	7.20	2	W	W	8.04
Total ¹	XX	'23,174	'150,887	'6.51	XX	23,051	152,273	6.61
Total ^{2,3}	XX	'25,544	'150,887	'5.91	XX	25,409	152,273	5.99

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

²Data may not add to totals shown because of independent rounding.

³One short ton is equal to 907 kilograms or 2,000 pounds. To convert metric tons to short tons, divide metric tons by 0.907185.

⁴Total shown in thousand short tons and thousand dollars.

TABLE 4
MARYLAND: CRUSHED STONE¹ SOLD OR USED BY PRODUCERS IN 1993, BY USE AND DISTRICT

(Thousand metric tons and thousand dollars)

Use	District 1		District 2	
	Quantity	Value	Quantity	Value
Construction aggregates:				
Coarse aggregate (+1 1/2 inch) ²	25	181	1,086	7,359
Coarse aggregate, graded ³	187	1,293	5,539	35,228
Fine aggregate (-3/8 inch) ⁴	107	851	1,867	12,142
Coarse and fine aggregate ⁵	1,019	4,677	5,029	29,916
Other construction materials ⁶	(⁷)	(⁷)	(⁷)	(⁷)
Agricultural ⁸	—	—	(⁷)	(⁷)
Chemical and metallurgical ⁹	(⁷)	(⁷)	(⁷)	(⁷)
Special ¹⁰	—	—	(⁷)	(⁷)
Unspecified: ¹¹				
Actual	(⁷)	(⁷)	(⁷)	(⁷)
Estimated	—	—	(⁷)	(⁷)
Total ¹²	3,171	14,957	19,880	137,316
Total ^{13,14}	3,494	14,957	21,914	137,316

¹To avoid disclosing company proprietary data, production reported in District 3 was included with "District 2."

²Includes filter stone, riprap and jetty stone, and other coarse aggregate.

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

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

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

⁶Includes roofing granules.

⁷Withheld to avoid disclosing company proprietary data; included with "Total."

⁸Includes agricultural limestone.

⁹Includes cement manufacture.

¹⁰Includes asphalt fillers or extenders, whiting or whiting substitute, and other specified uses not listed.

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

¹²Data may not add to totals shown because of independent rounding.

¹³One short ton is equal to 907 kilograms or 2,000 pounds. To convert metric tons to short tons, divide metric tons by 0.907185.

¹⁴Total shown in thousand short tons and thousand dollars.