

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.

In 1996, Maryland remained 36th among the 50 States in total nonfuel mineral production value,¹ according to the U.S. Geological Survey (USGS). The estimated value for 1996 was \$324 million, virtually unchanged from that of 1995. The State's nonfuel mineral production value totals for 1995 and 1996, as represented in table 1, are artificially low because data have been withheld to avoid disclosing company proprietary data. Maryland's ranking in 1996 was not affected by the withholding of data, however, the State would have moved up one place in rank in 1995. The State accounted for almost 1% of the U.S. total nonfuel mineral production value.

Crushed stone remained Maryland's leading nonfuel mineral commodity. Based on the State's 1996 total nonfuel mineral value in table 1, crushed stone accounted for 50% of that total, followed by portland cement, 30%, and construction sand and gravel, 19%. Compared with that of 1995, mineral commodity values that increased in 1996 were those of crushed stone and construction sand and gravel. Decreases occurred for portland and masonry cements, dimension stone, and common clays.

Compared with USGS estimates of the quantities produced in the other 49 States during 1996, Maryland was third in masonry cement, following a ranking of first in 1995. Additionally, the State produced significant quantities of crushed stone, portland cement, and dimension stone. All nonfuel minerals mined in Maryland were industrial minerals. All metals production, in particular primary aluminum and raw steel, were processed from materials received from foreign and other domestic sources. Based on preliminary figures for both metals, Maryland was eighth in the Nation in the production of primary aluminum and one of the top eight raw steel-producing States.

The Maryland Department of the Environment² (MDE) reported that they had delineated "zones of influence" for four limestone quarries. A "zone of influence" is an area where, if private property damage is sustained, the person suffering the loss must be reimbursed for damages by the

quarry operating within the zone's boundaries. The zones are based upon topography and historical data, on geologic and hydrogeologic factors, and potential effects to the area's wells. The quarry is initially presumed responsible in order to facilitate an immediate solution for the victim. For example, if a farmer loses a cow in a sinkhole because a quarry was pumping out ground water, the quarry is responsible for appropriately reimbursing the farmer for his loss. Later, the quarry can be relieved of responsibility if it can prove that it was not at fault. As part of the process, the MDE also seeks and obtains information from the quarry operators and public. MDE reported that public information meetings were held with a moderate response from the community. Efforts will continue in 1997 to produce 4 more of the planned total of 18 zones.

The year was rather quiet for the minerals industry. No new quarries were opened. Crushed stone and construction sand and gravel production followed the slowly increasing trend of the past several years.

¹The terms "nonfuel mineral production" and related "values" encompass variations in meaning, depending on 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 1996 USGS mineral production data published in this chapter are estimates as of February 1997. For some commodities (e.g., 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. Call MINES FaxBack at (703) 648-4999 from a fax machine with a touch-tone handset and request Document # 1000 for a telephone listing of all mineral commodity specialists, or call USGS information at (703) 648-4000 for the specialist's name and number. This telephone listing may also be retrieved over the Internet at: <http://minerals.er.usgs.gov/minerals/contacts/comdir.html>

²The following narrative information was submitted by Mr. Larrimore of the Maryland Department of the Environment. An additional State agency contact is Emery Cleaves, State Geologist, Maryland Geological Survey, 2300 St. Paul St., Baltimore, MD 21218-5210, telephone: (410) 554-5559, and Fax: (410) 554-5502.

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

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1994		1995		1996 p/	
	Quantity	Value	Quantity	Value	Quantity	Value
Cement (portland)	1,710	90,700	1,670	101,000	1,620	97,600
Clays	293	946	278	943	293	905
Gemstones	NA	1	NA	1	NA	1
Sand and gravel (construction)	8,920	61,200	9,700	61,700	9,750	62,400
Stone:						
Crushed	23,200 3/	157,000 3/	24,200	158,000	24,500	162,000
Dimension metric tons	18,800 3/	1,550 3/	20,700	2,260	11,100	1,190
Combined value of other industrial minerals	XX	29,000	XX	(4/)	XX	(4/)
Total	XX	340,000	XX	324,000 5/	XX	324,000 5/

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

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

2/ Data are rounded to three significant digits; may not add to totals shown.

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

4/ Value excluded to avoid disclosing company proprietary data.

5/ Partial total, excludes values that must be concealed to avoid disclosing company proprietary data.

TABLE 2
MARYLAND: CRUSHED STONE 1/ SOLD OR USED BY PRODUCERS IN 1995, BY USE 2/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Coarse aggregate (+1 1/2 inch): Riprap and jetty stone 3/	991	\$7,360	\$7.43
Coarse aggregate, graded:			
Concrete aggregate, coarse	2,350	16,200	6.90
Bituminous aggregate, coarse	1,520	9,920	6.54
Bituminous surface-treatment aggregate	232	1,760	7.57
Railroad ballast	W	W	6.21
Fine aggregate (-3/8 inch): Stone sand, concrete 4/	1,440	9,970	6.92
Coarse and fine aggregates:			
Graded road base or subbase	1,520	9,760	6.44
Unpaved road surfacing	W	W	5.94
Terrazzo and exposed aggregate	W	W	7.87
Crusher run or fill or waste	1,990	12,600	6.33
Other coarse and fine aggregates	685	2,830	4.13
Agricultural: Agricultural limestone	(5/)	(5/)	7.75
Chemical and metallurgical: Cement manufacture	(5/)	(5/)	2.50
Special: Whiting or whiting substitute	209	18,400	88.26
Unspecified: 6/			
Actual	9,600	54,300	5.66
Estimated	1,580	9,490	6.00
Total	24,200	158,000	6.54

W Withheld to avoid disclosing company proprietary data; included with "Other coarse and fine aggregates."

1/ Includes granite, limestone, marble, sandstone, and traprock.

2/ Data are rounded to three significant digits; may not add to totals shown.

3/ Includes filter stone.

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

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

6/ Includes production reported without a breakdown by end use and estimates for nonrespondents.

TABLE 3
MARYLAND: CRUSHED STONE SOLD OR USED, BY KIND 1/

Kind	1994				1995			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone	19 r/	16,000 r/	\$109,000 r/	\$6.81 r/	19	15,500	\$105,000	\$6.79
Granite	4	4,940	31,600	6.40	4	4,960	29,400	5.93
Traprock	3	2,010	14,100	7.02	2	W	W	6.31
Marble	(2/)	(2/)	(2/)	(2/)	2	W	W	6.21
Sandstone	4	242	2,000	8.26	3	191	1,430	7.46
Miscellaneous stone	(2/)	(2/)	(2/)	(2/)	--	--	--	--
Total	XX	23,200 r/	157,000 r/	6.75 r/	XX	24,200	158,000	6.54

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

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Excludes marble and miscellaneous stone from State total to avoid disclosing company proprietary data.

TABLE 4
MARYLAND: CRUSHED STONE 1/ 2/ SOLD OR USED BY PRODUCERS IN 1995,
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) 3/	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/	1,000	4,640	9,720	65,800
Agricultural 7/	--	--	(8/)	(8/)
Chemical and metallurgical 9/	--	--	(8/)	(8/)
Special 10/	--	--	209	18,400
Unspecified: 11/				
Actual	2,160	9,270	7,440	45,000
Estimated	--	--	1,580	9,490
Total	3,170	13,900	21,000	144,000

W Withheld to avoid disclosing company proprietary data; included with "Other coarse and fine aggregate."

1/ Production reported in District 3 was included with "District 2" to avoid disclosing company proprietary data.

2/ Data are rounded to three significant digits; may not add to totals shown.

3/ Includes filter stone and riprap and jetty stone.

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

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

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

7/ Includes agricultural limestone.

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

9/ Includes cement manufacture.

10/ Includes whiting or whiting substitute.

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

TABLE 5
MARYLAND: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1995,
BY MAJOR USE CATEGORY 1/

Use	Quantity (thousand metric tons)	Value (thousands)	Value per ton
Concrete aggregate (including concrete sand)	5,320	\$34,100	\$6.40
Plaster and gunite sands	145	1,110	7.67
Concrete products (blocks, bricks, pipe, decorative, etc.)	172	1,350	7.85
Asphaltic concrete aggregates and other bituminous mixtures	311	1,560	5.01
Road base and coverings 2/	473	3,620	7.65
Fill	510	1,670	3.28
Other 3/	54	524	9.70
Unspecified: 4/			
Actual	1,170	7,090	6.07
Estimated	1,540	10,700	6.93
Total or average	9,700	61,700	6.36

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes road and other stabilization (lime).

3/ Includes filtration, and snow and ice control.

4/ Includes production reported without a breakdown by end use and estimates for nonrespondents.

TABLE 6
MARYLAND: CONSTRUCTION SAND AND GRAVEL 1/ SOLD OR USED IN 1995,
BY USE AND DISTRICT 2/

(Thousand metric tons and thousand dollars)

Use	District 2		District 3	
	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products 3/	5,050	33,200	590	3,380
Asphaltic concrete aggregates and road base materials 4/	1,090	6,480	204	375
Other miscellaneous uses 5/	45	460	9	64
Unspecified: 6/				
Actual	1,170	7,090	--	--
Estimated	336	2,320	1,210	8,370
Total	7,690	49,500	2,010	12,200

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Production reported in District 1 was included with "District 2" to avoid disclosing company proprietary data.

3/ Includes plaster and gunite sands.

4/ Includes fill, and road and other stabilization (lime).

5/ Includes filtration, and snow and ice control.

6/ Includes production reported without a breakdown by end use and estimates for nonrespondents.