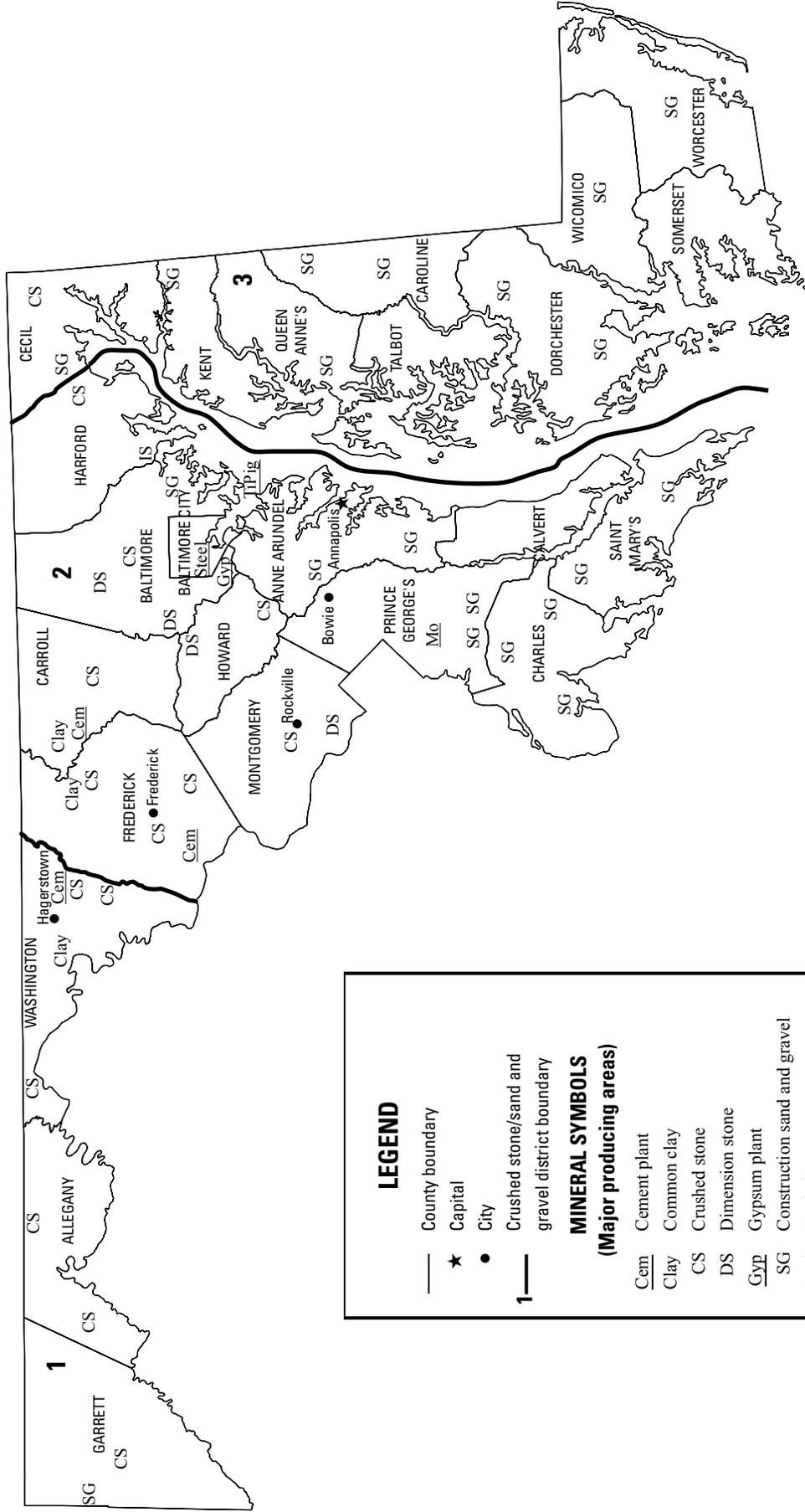




2006 Minerals Yearbook

MARYLAND

MARYLAND

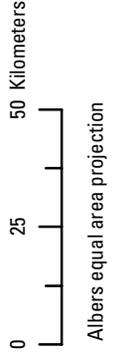


LEGEND

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

**MINERAL SYMBOLS
(Major producing areas)**

- Cem Cement plant
- Clay Clay
- CS Common clay
- DS Crushed stone
- Dyp Dimension stone
- SG Gypsum plant
- Steel Construction sand and gravel
- TiPig Titanium dioxide pigment plant



THE MINERAL INDUSTRY OF MARYLAND

This chapter has been prepared under a Memorandum of Understanding between the U.S. Geological Survey and the Maryland Department of the Environment, Minerals, Oil, and Gas Division, for collecting information on all nonfuel minerals.

In 2006, Maryland's nonfuel raw mineral production¹ was valued at \$653 million, based upon annual U.S. Geological Survey (USGS) data (table 1). This was an increase of \$73 million, up 12.6% from the State's 2005 total value of \$580 million, which followed a \$106 million, or more than 22%, increase from 2004 to 2005². The State ranked 33d among the 50 States in total nonfuel raw mineral production value and accounted for nearly 1% of the U.S. total value.

Crushed stone, portland cement, construction sand and gravel, and masonry cement, based upon value, were Maryland's leading nonfuel raw mineral commodities, the first three of which accounted for more than 99% of the State's reportable total nonfuel mineral value. In 2006, although crushed stone production was down slightly more than 4%, its \$40 million rise in value, a more than 14% increase, led the way in Maryland's increase in total value. This was followed by increases in portland cement and construction sand and gravel values. Portland cement production rose 4%, accounting for a \$27 million, or nearly 13%, increase in value, and construction sand and gravel value was up \$7 million, despite a small decrease in production (table 1). A moderate decrease took place in masonry cement production, the value of which was down by about \$4 million, and no production of industrial sand and gravel was reported to the USGS.

All nonfuel minerals mined in Maryland were industrial minerals. In 2006, the State continued to be a producer of significant quantities of crushed stone, portland cement, construction sand and gravel, and common clays (descending order of value), as compared with that of other producing States. All metal production, especially that of raw steel, consisted of the processing and refining of materials received from other domestic and foreign sources.

The narrative information that follows was provided by the Maryland Department of the Environment's (MDE) Mining Program³. In 2006, Maryland's mining operations continued to be very active with the production of aggregate related materials continuing at a brisk pace, overall, following the same level of production of the past several years.

¹The terms "nonfuel mineral production" and related "values" encompass variations in meaning, depending upon the 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 2006 USGS mineral production data published in this chapter are those available as of March 2008. All USGS Mineral Industry Surveys and USGS Minerals Yearbook chapters—mineral commodity, State, and country—can be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals>.

²Because data for industrial sand and gravel (2004-05) and masonry cement were withheld (company proprietary data), the actual total values for those years are higher than those reported in table 1.

³C. Edmon Larrimore, Program Manager of the Mining Program of the MDE, authored the text of the State mineral industry information provided by that agency.

Commodity Review

Industrial Minerals

Sand and Gravel, Construction.—Schuster Concrete opened a new sand production and wash plant in Caroline County on the Eastern Shore of Maryland. This 40-hectare (99-acre) site is located more than 120 kilometers (75 miles) from the major urban areas of Baltimore and Washington, DC, but is indicative of the lack of available lands for mining in the more densely developed population areas of the State. The material will be moved by way of trucks from the Caroline County location to markets mainly on the Western Shore of the Chesapeake Bay, where market demand outpaces available resources. The land will be reclaimed with open lakes and returned to agriculture land.

Stone, Crushed.—H.B. Mellott Estate, Inc. expanded its Beaver Creek quarry by adding an additional 29 ha (72 acres) of available reserves. This limestone mine was used for aggregate-related production and is located just east of Hagerstown in Washington County. The permit process was prolonged for several months to address issues of historical concern and ground water impacts. As of yearend, mining had only been permitted to the upper reaches of ground water.

The Blue Mount quarry has been in existence since 1902. Production of stone, however, has been minimal for the past 20 years. The quarry was purchased by Patuxent Materials, Inc. from Blue Mount Quarry, Inc. in 2006 and the permit was transferred to them. Active stone production will resume supplying aggregate material to the northern Baltimore County and southern York area of Pennsylvania.

Environmental Issues and Mine Reclamation

With land values high and demand growing for residential and commercial properties, a considerable amount of discussion took place regarding the enhanced reclamation of quarry sites as potential projects for the upcoming years. A demand for disposal space for dredge spoils from the Baltimore harbor was the subject of a special committee working for the Maryland State Legislature tasked with securing such sites, some of which could include abandoned mine sites. No agreements were reached, with talks still in the exploratory stages, but there was growing interest in transforming what once were abandoned mine sites into land development projects at no cost to the public. No new mining-related State legislation was introduced in 2006.

TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN MARYLAND^{1,2}

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2004		2005		2006	
	Quantity	Value	Quantity	Value	Quantity	Value
Cement, portland	2,520	175,000 ^c	2,550 ^r	210,000 ^c	2,650	237,000 ^c
Clays, common	262	571	317	686	286	851
Gemstones	NA	1	NA	1	NA	1
Sand and gravel, construction	12,700	75,500	12,300	89,500	11,900	96,700
Stone:						
Crushed	35,300	214,000	33,500 ^r	277,000 ^r	32,000	317,000
Dimension	27	9,580	26	3,010	14	1,750
Combined values of cement (masonry), sand and gravel [industrial (2004-05)]	XX	(3)	XX	(3)	XX	(3)
Total	XX	474,000	XX	580,000 ^r	XX	653,000

^cEstimated. ^rRevised. NA Not available. XX Not applicable.

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

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

³Value withheld to avoid disclosing company proprietary data.

TABLE 2
MARYLAND: CRUSHED STONE SOLD OR USED, BY KIND¹

Kind	2005			2006		
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Number of quarries	Quantity (thousand metric tons)	Value (thousands)
Limestone ²	18	21,400	\$181,000	20	21,200	\$218,000
Granite	3	6,020 ^r	42,700 ^r	4	5,960	54,400
Sandstone	1	W	W	1	W	W
Shell	1	322	2,730	--	--	--
Traprock	3 ^r	W	W	2	W	W
Total	XX	33,500 ^r	277,000 ^r	XX	32,000	317,000

^rRevised. W Withheld to avoid disclosing company proprietary data; included in "Total." XX Not applicable. -- Zero.

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

²Includes limestone-dolomite reported with no distinction between the two.

TABLE 3
MARYLAND: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2006, BY USE¹

(Thousand metric tons and thousand dollars)

Use	Quantity	Value
Construction:		
Coarse aggregate (+1½ inch):		
Riprap and jetty stone	273	2,220
Filter stone	W	W
Other coarse aggregate	181	2,750
Coarse aggregate, graded:		
Concrete aggregate, coarse	3,140	16,100
Bituminous aggregate, coarse	1,060	6,520
Bituminous surface-treatment aggregate	W	W
Railroad ballast	W	W
Other graded coarse aggregate	2,680	31,600
Fine aggregate (-¾ inch):		
Stone sand, concrete	W	W
Stone sand, bituminous mix or seal	699	5,530
Screening, undesignated	W	W
Other fine aggregate	1,040	12,100
Coarse and fine aggregates:		
Graded road base or subbase	2,690	16,300
Unpaved road surfacing	W	W
Terrazzo and exposed aggregate	W	W
Crusher run or fill or waste	636	5,910
Roofing granules	W	W
Other coarse and fine aggregates	2,830	27,900
Other construction materials	444	4,120
Agricultural, limestone	W	W
Chemical and metallurgical:		
Cement manufacture	3,620	62,500
Lime manufacture	W	W
Sulfur oxide removal	W	W
Unspecified: ²		
Reported	6,450	59,800
Estimated	5,100	48,000
Total	11,600	107,000
Grand total	32,000	317,000

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

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

²Reported and estimated production without a breakdown by end use.

TABLE 4
MARYLAND: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2006, BY USE AND DISTRICT¹

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1½ inch) ²	W	W	W	W	--	--
Coarse aggregate, graded ³	W	W	6,680	52,900	--	--
Fine aggregate (-¾ inch) ⁴	W	W	W	W	--	--
Coarse and fine aggregate ⁵	W	W	4,560	42,000	--	--
Other construction materials	--	--	444	4,120	--	--
Agricultural ⁶	--	--	W	W	--	--
Chemical and metallurgical ⁷	W	W	W	W	--	--
Unspecified:⁸						
Reported	1,400	13,000	4,720	43,800	326	3,030
Estimated	--	--	780	7,200	4,400	40,000
Total	4,380	41,900	23,000	232,000	4,680	43,400

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

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

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

⁵Includes crusher run or fill or waste, graded road base or subbase, unpaved road surfacing, roofing granules, terrazzo and exposed aggregate, and other coarse and fine aggregates.

⁶Includes agricultural limestone.

⁷Includes cement and lime manufacture and sulfur oxide removal.

⁸Reported and estimated production without a breakdown by end use.

TABLE 5
MARYLAND: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2006,
BY MAJOR USE CATEGORY¹

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate (including concrete sand)	6,920	\$61,000	\$8.82
Plaster and gunit sands	121	1,060	8.75
Asphaltic concrete aggregates and other bituminous mixtures	232	1,540	6.61
Road base and coverings	223	2,310	10.36
Fill	686	2,810	4.09
Other miscellaneous uses ²	289	2,240	7.76
Unspecified:³			
Reported	1,000	6,060	6.05
Estimated	2,400	19,700	8.22
Total or average	11,900	96,700	8.15

¹Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

²Includes snow and ice control.

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

TABLE 6
 MARYLAND: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2006, BY USE AND DISTRICT^{1,2}

(Thousand metric tons and thousand dollars)

Use	Districts 1 and 2		District 3	
	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products	3,600	38,000	3,440	24,100
Asphaltic concrete aggregates and road base materials	440	3,750	15	96
Fill	445	1,740	241	1,070
Other miscellaneous uses ³	20	165	269	2,080
Unspecified: ⁴				
Reported	969	5,830	33	231
Estimated	2,020	16,600	379	3,140
Total	7,490	66,000	4,380	30,700

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

²Districts 1 and 2 are combined to avoid disclosing company proprietary data.

³Includes snow and ice control.

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