

# THE MINERAL INDUSTRY OF PUERTO RICO

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 Department of Natural Resources, Commonwealth of Puerto Rico, for collecting information on all nonfuel minerals.

In 1994, the estimated value<sup>2</sup> of nonfuel mineral commodities produced in Puerto Rico was \$128 million, a 2% increase as compared with that of 1993, according to the U.S. Bureau of Mines (USBM). This followed a 1.5% increase in value from 1992 to 1993. The combined values of portland cement and crushed stone, the island's leading and second-leading mineral commodities, accounted for almost 97% of the reported total for Puerto Rico. The estimated value of construction sand and gravel, traditionally the third-leading mineral commodity on the island, was not available, also not having been included with data of either of the previous 2 years. In addition, the value of another important mineral commodity, industrial sand, was withheld and not included in the reported value to protect proprietary data of the island's only industrial sand producer. Although these two minerals were not included in the island's total, the reported value of Puerto Rico's mineral production would place it 43d if ranked in a comparison with the 50 United States. Compared with that of 1993, the mineral commodity values for crushed stone,

lime, and common clays increased. Decreases occurred for industrial sand and gravel.

Based on USBM estimates of the quantities of minerals produced in the United States and its Territories during 1994, production of portland cement, crushed stone, and lime increased in Puerto Rico while common clay production slightly decreased. Increases in the estimated production of crushed stone were also reported in 1994 for the U.S.-administered islands of American Samoa and Guam.

<sup>1</sup>While a Memorandum of Understanding (MOU) was officially made between the U.S. Bureau of Mines (USBM) and the Commonwealth of Puerto Rico, MOU's were not established with the Commonwealth of the Northern Mariana Islands, U.S. Caribbean and Pacific Island Possessions, nor the U.S. Trust Territory of the Pacific Islands. Nevertheless, data on nonfuel mineral production was reported to the USBM for the islands of American Samoa and Guam of the Pacific Island Possessions. These data appear in table 1.

<sup>2</sup>The term value in this document refers to the monetary value of nonfuel minerals as represented by either mine shipments, mineral commodity sales, or marketable production as is applicable to the individual mineral commodities.

TABLE 1  
NONFUEL RAW MINERAL PRODUCTION<sup>1</sup> IN THE COMMONWEALTH OF PUERTO RICO AND ISLANDS ADMINISTERED BY THE UNITED STATES

Mineral	1992		1993		1994 <sup>p</sup>	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
<b>PUERTO RICO</b>						
Cement (portland) thousand metric tons	1,298	\$119,643	1,310	\$72,619	1,444	\$72,600
Clays do.	W	527	155	508	149	519
Lime do.	27	3,717	—	—	25	3,830
Sand and gravel (industrial) do.	W	W	58	1,396	W	W
Stone (crushed) do.	NA	NA	7,845	51,059	<sup>e</sup> 8,000	<sup>e</sup> 51,000
Total	XX	<sup>2</sup> 123,887	XX	125,582	XX	<sup>2 3</sup> 128,000
<b>ADMINISTERED ISLANDS</b>						
American Samoa (crushed) thousand metric tons	—	—	83	W	<sup>e</sup> 100	W
Guam: Stone (crushed) do.	—	—	1,373	15,095	<sup>e</sup> 1,400	<sup>e</sup> 15,100
Total	XX	—	XX	<sup>2</sup> 15,095	XX	<sup>2 3</sup> 15,100

<sup>e</sup>Estimated. NA Not available. W Withheld to avoid disclosing company proprietary data; not included in "Total." XX Not applicable.

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

<sup>2</sup>Total does not include value of item withheld.

<sup>3</sup>Data do not add to total shown because of independent rounding.

TABLE 2  
**PUERTO RICO: CRUSHED STONE<sup>1</sup> 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 <sup>2</sup>	148	\$1,162	\$7.85
Coarse aggregate, graded:			
Concrete aggregate, coarse	825	5,448	6.60
Bituminous aggregate, coarse	3	21	7.00
Bituminous surface-treatment aggregate	53	312	5.89
Other graded coarse aggregate	50	355	7.10
Fine aggregate (-3/8 inch):			
Stone sand, concrete	243	1,894	7.79
Stone sand, bituminous mix or seal	372	2,325	6.25
Screening, undesignated	(3)	1	4.96
Other fine aggregate	82	547	6.67
Coarse and fine aggregates:			
Graded road base or subbase	66	364	5.52
Unpaved road surfacing	W	W	4.29
Terrazzo and exposed aggregate	31	271	8.74
Other construction materials	132	656	4.97
Roofing granules	W	W	7.02
Other miscellaneous uses:			
Other specified uses not listed <sup>4</sup>	1,221	6,150	5.04
Unspecified: <sup>5</sup>			
Actual	143	(6)	(6)
Estimated	4,476	32,730	7.31
Total <sup>7</sup>	7,845	51,059	6.51
Total <sup>8 9</sup>	8,648	51,059	5.90

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

<sup>1</sup>Includes granite, limestone, marble, miscellaneous stone, sandstone, and volcanic cinder and scoria; excludes sandstone value from State total to avoid disclosing company proprietary data.

<sup>2</sup>Includes filter stone and macadam.

<sup>3</sup>Less than 1/2 unit.

<sup>4</sup>Includes poultry grit and mineral food, cement manufacture, and other fillers or extenders.

<sup>5</sup>Includes production reported without a breakdown by use and estimates for nonrespondents.

<sup>6</sup>Excludes sandstone value from State total to avoid disclosing company proprietary data.

<sup>7</sup>Data may not add to totals shown because of independent rounding.

<sup>8</sup>One short ton is equal to 907 kilograms or 2,000 pounds. To convert metric tons to short tons, divide metric tons by 0.907185.

<sup>9</sup>Total shown in thousand short tons and thousand dollars.

TABLE 3  
**PUERTO RICO: CRUSHED STONE SOLD OR USED, BY KIND**

Kind	1991 <sup>1</sup>				1993			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone	30	'5,875	'\$35,740	'\$6.08	29	6,161	\$41,195	\$6.69
Marble	'3	'503	'3,330	'6.62	3	230	1,575	6.85
Granite	1	W	W	7.39	4	495	3,865	7.81
Sandstone and quartzite	'5	'462	'2,582	'5.59	3	W	( <sup>2</sup> )	( <sup>2</sup> )
Volcanic cinder and scoria	'1	W	W	'6.51	1	W	1,180	W
Miscellaneous stone	2	W	W	10.08	3	468	3,246	6.94
Total <sup>3</sup>	XX	'8,008	49,839	6.22	XX	7,845	51,059	6.51
Total <sup>4, 5</sup>	XX	'8,827	49,839	5.65	XX	8,648	51,059	5.90

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

<sup>2</sup>Includes "sandstone and quartzite," reported with no distinction between the two.

<sup>3</sup>Excludes sandstone value from State total to avoid disclosing company proprietary data.

<sup>4</sup>Data may not add to totals shown because of independent rounding.

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

<sup>6</sup>Total shown in thousand short tons and thousand dollars.