

# 2008 Minerals Yearbook

STONE, DIMENSION [ADVANCE RELEASE]

### STONE, DIMENSION

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#### Domestic survey data and tables were prepared by Samir Hakim, statistical assistant.

U.S. production of dimension stone in 2008 was estimated to be 1.8 million metric tons (Mt) valued at \$324 million, which was a 6% decrease in tonnage and a 7% decrease in value compared with those of 2007 (table 1). Exports decreased in value by 12% to \$65.7 million, and imports for consumption decreased in value by 15% to \$2.15 billion. The value of apparent consumption was estimated to be \$2.4 billion. Trade data in this report are from the U.S. Census Bureau. All percentages in the report were computed using unrounded data.

In recent years, most dimension stone has been used in construction applications, with the largest portions being sold or used as ashlars and partially squared pieces, curbing, flagstone, and rough block for building and construction. Monumental stone, another major type, includes memorials of various kinds.

Dimension stone is a natural rock material quarried for the purpose of obtaining blocks or slabs that meet specifications as to size (width, length, and thickness) and shape. Color, grain texture and pattern, and surface finish of the stone also are normal requirements by both customers and the stone industry. Durability (a time measure of the ability of dimension stone to endure and maintain its essential and distinctive characteristics), strength, and the ability of the stone to take a polish are other important selection criteria.

Although various igneous, metamorphic, and sedimentary rocks are used as dimension stone, the principal rock types are granite, limestone, marble, sandstone, and slate. Other varieties of dimension stone that are normally considered to be special minor types include alabaster (massive gypsum) and soapstone (massive talc). A more detailed discussion of descriptions of specific types of dimension stone can be found in the 2007 dimension stone Minerals Yearbook chapter.

#### **Production**

Dimension stone production data for the United States are derived by the U.S. Geological Survey (USGS) from a voluntary canvass of U.S. quarry producers of rough and dressed dimension stone. Of the 236 dimension stone-producing operations included in the survey for 2008, 144 (61%) responded, which represented 62% of the tonnage; the remaining tonnage was estimated based partly on prior years' reporting and employment data provided by the Mine Safety and Health Administration (MSHA). Additionally, significant changes to the USGS dimension stone survey for 2008 resulted in revisions to tonnage and value data for 2004 through 2007, including the deletion of known abandoned quarry operations (table 1).

Data in this report cover rough crude quarried stone, irregular-shaped and rectangular blocks, and more highly processed stone. A number of other terms also are used to describe further processing, such as "worked," "dressed," "finished," and "manufactured." These and other terms used

by the dimension stone industry describe such features as the mineral composition of the rock, the shape of the product, the method of finishing a stone, and the type of finish applied. No adjustments are made in the data to account for the sometimes substantial losses in processing rough stone into dressed stone. Sold or used data are considered to be equivalent to production because changes in stocks are not surveyed.

In 2008, limestone accounted for 603,000 metric tons (t) (34%) of the total domestic dimension stone production of 1.8 Mt, followed by granite (26%), sandstone (19%), miscellaneous stone (18%), marble (2%), and slate (1%). Granite accounted for about \$107 million (33%) of the value of total domestic production of \$324 million, followed by limestone (27%), sandstone (16%), miscellaneous (14%), marble (5%), and slate (5%).

Production of dimension stone was reported in 37 States. Leading producer States were, in descending order by tonnage, Texas, Wisconsin, Indiana, Georgia, and Arizona. These States accounted for about 56% of the domestic production. The leading producer States were, in descending order by value, Vermont, Indiana, Wisconsin, Texas, and North Carolina. These States contributed about 49% of the value of domestic production (table 3).

The top five producing companies were Buechel Stone Corp. in Wisconsin; Eden Stone Co. Inc. in Wisconsin; Indiana Limestone Co. in Indiana; Mezger Enterprises Inc. in Texas; and Swenson Granite Co. LLC in New Hampshire and Vermont. These companies produced about 27% of domestic production in tonnage and about 21% of production value. The leading 14 companies accounted for 45% of total domestically produced tonnage and 48% of the value.

Rough stone blocks split or cut from a quarry face are transported to processing plants that typically are located at the quarry site, at least for preliminary sizing. Further dressing, which includes final sizing and finishing operations, such as decorating, edging, and polishing, also may be done at the quarry site.

*Granite*.—Dimension granite was produced by 42 companies operating 77 quarries in 18 States. Production was 464,000 t valued at \$107 million. Granite production tonnage decreased by 13% and the value decreased by about 5% compared with those of 2007. The top five producing States were, in descending order by tonnage, Georgia, Vermont, North Carolina, Massachusetts, and New Hampshire. Georgia accounted for 33% of the tonnage and 11% of the value of U.S. granite production (table 4).

Cold Spring Granite Co., Fletcher Granite Co., and Swenson Granite Co. LLC, which were the leading producers, accounted for 41% of U.S. granite production by tonnage and 47% of U.S. granite production by value.

Limestone.—Dimension limestone was produced by 41 companies from 54 quarries in 12 States. Production decreased in 2008 by about 13% to 603,000 t from 690,000 t in 2007. The value decreased by 22% to \$87.9 million in 2008 from \$112 million in 2007. The top four producing States were, in descending order by tonnage, Texas, Indiana, Wisconsin, and Arkansas. Indiana, Texas, and Wisconsin combined produced 89% of the U.S. tonnage and 79% of the value (table 5). Buechel Stone, Eden Stone, Indiana Limestone Co., Mezger Enterprises, and Victor Oolitic Stone Co., which were the leading producers, accounted for 71% of all U.S. limestone tonnage and about 61% of the value.

Sandstone.—Dimension sandstone was produced by 48 companies that operated 55 quarries in 16 States. Production increased by 4% to 346,000 t in 2008 from 332,000 t in 2007. The value increased by 8% to \$50.2 million in 2008 from \$46.5 million in 2007. The top five producing States were, in descending order by tonnage, Arizona, New York, Oklahoma, Arkansas, and Ohio (table 6).

Cornerstone Materials LLC, Drake Stone Products Inc., Harley Gray Stone Co., Robinson Brick Co., and Tompkins Bluestone Co. Inc., which were the leading producers, accounted for about 50% of the tonnage and 52% of the value of domestic production.

*Marble.*—Marble was mined by five companies that operated seven quarries in six States. Production tonnage decreased by 11% in 2008 to 42,600 t valued at \$15.1 million from 47,600 t valued at \$15.3 million in 2007 (table 10). Georgia was the leading producing State, followed by Vermont, Tennessee, Colorado, Alabama, and Wisconsin. The leading producers were Georgia Marble Co. (a subsidiary of Polycor Inc.) and Vermont Quarries Corp.

*Slate.*—Slate was produced by 16 companies that operated 20 quarries in 5 States. Production decreased by 3% to 26,900 t in 2008 from 27,800 t in 2007. The value decreased by about 6% to \$17.5 million in 2008 compared with that of 2007 (table 12). The top producing States were Vermont, New York, and Pennsylvania. The leading producers were Newmont Slate Co., Inc., Ritchie Bros. Slate Co. Inc., and Western Slate Inc.

#### Consumption

For the purposes of this report, apparent consumption is calculated to be production plus imports for consumption minus exports; changes in industry stocks are not considered because such data are not available. Value data are used in the apparent consumption calculation because tonnage data are not available for imports and exports. Overall, the value of apparent consumption of dimension stone in the United States was estimated to be \$2.4 billion in 2008; this was a 14% decrease compared with that of 2007.

Rough stone represented about 51% of the tonnage and 38% of the value of all dimension stone sold or used by domestic producers, which included exports. The leading uses of rough stone, by tonnage, were in building and construction (46%), and in irregular-shaped stone (30%). Dressed stone represented 49% by tonnage and 62% by value of the total stone sold or used. The leading uses within dressed stone, by tonnage, were in other uses, which included panels and veneer, tile, blackboards,

exports, unspecified uses, structural and sanitary, and unlisted uses (29%); ashlars and partially squared pieces (28%); and flagging (15%) (table 7).

Uses for the different varieties of dimension stone varied considerably. The major uses of granite sold or used in 2008, by tonnage, were in monumental rough stone (32%), curbing (19%), rough blocks for building and construction (14%), and unlisted rough stone uses (12%) (table 8). Primary uses of limestone, by tonnage, were in rough blocks for building and construction (38%), and in dressed stone for ashlars and partially squared pieces (22%) (table 9). Primary uses of marble, by tonnage, were in rough blocks for building and construction (38%), and rough stone, other uses, including monumental stone, and unlisted and unspecified uses (33%) (table 10). Primary uses of sandstone, by tonnage, were in rough blocks for building and construction (27%), and in dressed stone for flagging (24%) (table 11). Dimension slate sold or used by producers in the United States in 2008, by tonnage, was principally for roofing (72%), flagging (18%), and unlisted and unspecified uses (7%) (table 12).

#### **Prices**

The average 2008 value for dimension stone was \$180 per metric ton, unchanged from that of 2007 based on the USGS canvass. The average unit values for different types of dimension stone were granite, \$230 per ton; limestone, \$146 per ton; marble, \$355 per ton; sandstone, \$145 per ton; and slate, \$651 per ton. Available price data show considerable variation. Prices are substantially different not only for the kind of stone, but also for the appearance of the same kind of stone. Color, grain structure, and finish contribute significantly to price and marketability.

#### **Foreign Trade**

*Exports.*—In 2008, total exports of dimension stone decreased by 12% in value to \$65.7 million compared with those of 2007; granite accounted for 56% of the export value. The largest share of granite was exported to China (table 13). Although unreported, a significant amount of granite was probably reexported back to the U.S. market.

*Imports.*—The value of imports for consumption of dimension stone types decreased by 15% in 2008 to \$2.15 billion (table 1). Brazil was the major single source of imported granite in 2008, accounting for 35% by value. China, which continued to be a major source of granite, accounted for 25% of granite imports by value. Other important granite import sources included Italy (17%) and India (15%) (table 14). Italy also was a major source of rough and dressed marble imports (tables 15–16). Duties on imported dimension stone are listed in table 2.

#### **World Review**

World dimension stone production, including the United States, was estimated to be approximately 103 Mt in 2008. Although there was probably some small-scale production in the majority of the world's nations, dimension stone was produced and officially reported in about 23 countries. The top

five producing countries in 2008 were, in descending order by tonnage, China, India, Iran, Turkey, and Italy, and these countries accounted for about 70% of the world's production. Global production of dimension stone decreased by 3% in 2008 compared with that of 2007; with the exception of Turkey, all of the top five producing countries experienced production declines. Along with Greece, the United States ranked 10th in world production of dimension stone in 2008 (Napoli, 2009, p. 83).

#### Outlook

The global economic downturn that commenced in late 2008 had a negative effect on both domestic and international sectors of the dimension stone industry. Declines in the United States included production, exports, and imports of dimension stone. The economic downturn resulted in decreased demand for the use of stone in both commercial and residential applications. Decreased demand was expected to continue well into 2009. Industry observers do not anticipate a recovery of the global dimension stone industry until yearend 2009 or 2010 (Napoli, 2009).

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 $\label{eq:table 1} {\sf TABLE~1}$  SALIENT U.S. DIMENSION STONE STATISTICS  $^1$ 

(Thousand metric tons and thousand dollars)

	2004	2005	2006	2007	2008
Sold or used by producers:					
Quantity	1,900 <sup>r</sup>	2,000 <sup>r</sup>	1,850 <sup>r</sup>	1,920 <sup>r</sup>	1,800
Value	324,000 <sup>r</sup>	329,000 <sup>r</sup>	334,000 r	346,000 <sup>r</sup>	324,000
Exports, value	63,700	66,100	76,000	74,300	65,700
Imports for consumption, value	1,790,000	2,180,000	2,500,000	2,540,000	2,150,000

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<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits.

### $\label{eq:table 2} \text{U.s. IMPORT DUTIES ON DIMENSION STONE}$

The state of	1	NTR, <sup>2</sup>	Non-NTR, <sup>2</sup>
Tariff item	HTS <sup>1</sup> code	January 1, 2008	January 1, 2008
Slate, rough blocks or slabs	2514.00.0000	Free	25% ad valorem.
Rough blocks or slabs of marble, travertine, other calcareous	2515 00 0000		
monumental or building stone:	2515.00.0000		
Marble and travertine:			
Crude or roughly trimmed	2515.11.0000	Free	\$22.95 per cubic meter.
Marble, merely cut	2515.12.1000	do.	13% ad valorem.
Travertine, merely cut	2515.12.2000	3.0% ad valorem	50% ad valorem.
Other calcareous stone alabaster	2515.20.0000	do.	Do.
Rough blocks or slabs of granite, porphyry, basalt, sandstone,			
other monumental or building stone:	2516.00.0000		
Granite:			
Crude or roughly trimmed	2516.11.0000	Free	\$8.83 per cubic meter.
Merely cut	2516.12.0000	2.8% ad valorem	60% ad valorem.
Sandstone:			
Crude or roughly trimmed	2516.21.0000	Free	\$5.30 per cubic meter.
Merely cut	2516.22.0000	3.0% ad valorem	50% ad valorem.
Other monumental or building stone	2516.90.0000	do.	Do.
Setts, curbstones, flagstones	6801.00.0000	2.8% ad valorem	60% ad valorem.
Worked monumental or building stone:	6802.00.0000		
Tiles and cubes under 7 centimeters square, granules	6802.10.0000	4.8% ad valorem	40% ad valorem.
Other stone and articles with a flat or even surface:			
Marble, travertine, and alabaster:	6802.21.0000		
Travertine	6802.21.1000	4.2% ad valorem	50% ad valorem.
Other	6802.21.5000	1.9% ad valorem	13% ad valorem.
Other calcareous stone	6802.22.0000	4.9% ad valorem	50% ad valorem.
Granite	6802.23.0000	3.7% ad valorem	60% ad valorem.
Other stone	6802.29.0000	6.0% ad valorem	30% ad valorem.
Other:			
Marble, travertine, and alabaster:	6802.91.0000		
Marble:			
Slabs	6802.91.0500	2.5% ad valorem	15% ad valorem.
Other	6802.91.1500	4.9% ad valorem	50% ad valorem.
Travertine:		,,,,	
Travertine articles of subheading 6802.21.1000 that have			
been dressed or polished, but not further worked	6802.91.2000	4.2% ad valorem	50% ad valorem.
Other	6802.91.2500	3.7% ad valorem	40% ad valorem.
Alabaster	6802.91.3000	4.7% ad valorem	50% ad valorem.
Other calcareous stone	6802.92.0000	4.9% ad valorem	Do.
Granite	6802.93.0000	3.7% ad valorem	60% ad valorem.
Other stone	6802.99.0000	6.5% ad valorem	40% ad valorem.
Worked slate and articles:	6803.00.0000	0.570 au valoitill	TO /U au vaiOlelli.
	6803.00.1000	3 30% ad violarom	25% ad valorem.
Roofing slate Other	6803.00.1000	3.3% ad valorem Free	
Do do Ditto	0003.00.3000	1100	Do.

Do., do. Ditto

<sup>&</sup>lt;sup>1</sup>Harmonized Tariff Schedule of the United States.

<sup>&</sup>lt;sup>2</sup>Normal trade relations.

 $\label{thm:constraint} {\it TABLE~3}$  DIMENSION STONE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY  ${\it STATE}^1$ 

	200	)7	2008		
	Quantity	Value	Quantity	Value	
State	(metric tons)	(thousands)	(metric tons)	(thousands)	
Alabama	3,770	\$2,110	6,720	\$3,720	
Arizona	95,100	12,500	123,000	16,400	
Arkansas	20,700	3,080	21,400	2,740	
California	38,800	12,300	26,200	7,320	
Colorado	21,200	3,870	27,500	4,510	
Georgia	162,000 r	18,900 r	169,000	18,200	
Idaho	33,800	4,200	33,600	4,130	
Indiana	236,000	37,800	203,000	35,600	
Kansas	13,900	1,990	19,900	2,560	
Maine	6,180	1,580	7,120	1,720	
Maryland	17,300	2,680	8,270	1,740	
Massachusetts	98,300 <sup>r</sup>	12,000 r	53,000	7,140	
Michigan	10,800	891	10,800	891	
Minnesota	27,600 <sup>r</sup>	14,400 r	31,100	17,200	
Missouri	3,120	668	3,120	668	
Montana	43,100	11,700	57,800	9,490	
New Mexico	20,000	1,380	26,600	939	
New York	70,200 <sup>r</sup>	12,000 <sup>r</sup>	57,000	16,000	
North Carolina	48,100 <sup>r</sup>	20,400 r	58,400	25,200	
Ohio	36,700 <sup>r</sup>	6,050 r	25,400	940	
Oklahoma	65,400 <sup>r</sup>	11,700 <sup>r</sup>	53,000	8,750	
Pennsylvania	58,900 <sup>r</sup>	16,200 <sup>r</sup>	41,700	11,100	
South Carolina	9,230	850	3,800	472	
Tennessee	8,860	2,720	5,940	1,820	
Texas	243,000 <sup>r</sup>	31,600 <sup>r</sup>	269,000	27,700	
Utah	8,160 <sup>r</sup>	619 <sup>r</sup>	9,130	707	
Vermont	110,000 <sup>r</sup>	35,700 <sup>r</sup>	112,000	35,900	
Virginia	5,400 <sup>r</sup>	547 <sup>r</sup>	9,390	1,040	
West Virginia	1,950	329	1,360	230	
Wisconsin	307,000 <sup>r</sup>	35,900 <sup>r</sup>	250,000	33,300	
Other <sup>2</sup>	98,600 <sup>r</sup>	47,100 <sup>r</sup>	75,900	29,200	
Total	1,920,000 <sup>r</sup>	346,000 <sup>r</sup>	1,800,000	324,000	

Revised.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

 $<sup>^2\</sup>mbox{Includes}$  Connecticut, Illinois, Nevada, New Hampshire, South Dakota, Washington, and Wyoming.

TABLE 4  $\label{eq:dimension} \mbox{ DIMENSION GRANITE SOLD OR USED BY PRODUCERS IN } \mbox{ THE UNITED STATES, BY STATE$^1 }$ 

	200	)7	200	08
	Quantity	Value	Quantity	Value
State	(metric tons)	(thousands)	(metric tons)	(thousands)
California	17,300	\$5,810	13,500	\$4,600
Georgia	145,000 <sup>r</sup>	13,600 <sup>r</sup>	152,000	11,600
Maine	6,180	1,580	7,120	1,720
Massachusetts	90,700	11,300	41,200	5,540
New Hampshire	37,000	5,570	33,800	4,900
North Carolina	47,000	19,900	50,300	23,900
South Carolina	9,230	850	3,800	472
Vermont	73,900	19,900	76,300	21,200
Other <sup>2</sup>	110,000 <sup>r</sup>	34,200 <sup>r</sup>	85,900	33,100
Total	536,000 <sup>r</sup>	113,000 <sup>r</sup>	464,000	107,000

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	200	)7	2008		
	Quantity	Value	Value Quantity		
State	(metric tons)	(thousands)	(metric tons)	(thousands)	
Arkansas	6,310	\$1,420	1,080	\$115	
Indiana	236,000	37,800	203,000	35,600	
Texas	221,000	27,100	253,000	24,800	
Wisconsin	159,000	28,200	81,100	8,800	
Other <sup>2</sup>	67,900 <sup>r</sup>	17,400 <sup>r</sup>	65,100	18,600	
Total	690,000 r	112,000 <sup>r</sup>	603,000	87,900	

 $<sup>^{\</sup>rm r}$ Revised.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Includes Maryland, Minnesota, Missouri, New York, Oklahoma, Pennsylvania, South Dakota, Texas, Virginia, Wisconsin, and Puerto Rico.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

 $<sup>^2 \</sup>rm Includes$  California, Illinois, Kansas, Maryland, Minnesota, Ohio, Oklahoma, and Pennsylvania.

TABLE 6  $\label{table 2.1} \mbox{DIMENSION SANDSTONE SOLD OR USED BY PRODUCERS IN } \mbox{THE UNITED STATES, BY STATE$^1}$ 

	200	)7	200	08
	Quantity	Value	Quantity	Value
State	(metric tons)	(thousands)	(metric tons)	(thousands)
Arizona	95,100	\$12,500	123,000	\$16,400
Arkansas	14,300	1,660	20,300	2,630
New York	66,400 <sup>r</sup>	9,600 <sup>r</sup>	53,300	13,700
Ohio	27,700	5,520	18,500	543
Oklahoma	50,300	10,000	39,600	7,190
Pennsylvania	9,710	1,530	14,100	2,290
Other <sup>2</sup>	68,500 <sup>r</sup>	5,610 <sup>r</sup>	78,000	7,430
Total	332,000 <sup>r</sup>	46,500 <sup>r</sup>	346,000	50,200

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 ${\rm TABLE}~7$  DIMENSION STONE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY USE  $^{\rm 1,2}$ 

	20	07 <sup>r</sup>	20	08
	Quantity	Value	Quantity	Value
Use	(metric tons)	(thousands)	(metric tons)	(thousands)
Rough stone:				
Rough blocks for building and construction	416,000	\$53,900	427,000	\$54,000
Irregular-shaped stone	240,000	25,900	273,000	30,800
Monumental	156,000	22,100	183,000	30,000
Other <sup>3</sup>	112,000	21,300	41,200	9,510
Dressed stone:	_			
Ashlars and partially squared pieces	238,000	44,900	242,000	45,100
Slabs and blocks for building and construction	61,200	13,200	67,000	13,200
Monumental	78,500	32,100	51,900	23,500
Curbing	147,000	21,600	97,000	11,300
Flagging	169,000	21,400	135,000	21,600
Flagging (slate)	3,570	1,900	4,860	2,730
Roofing slate	21,600	14,100	19,400	11,800
Flooring slate	1,050	963	789	905
Other <sup>4</sup>	281,000	73,000	258,000	69,100
Total	1,920,000	346,000	1,800,000	324,000

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 $<sup>^{1}\</sup>mathrm{Data}$  are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Includes California, Colorado, Idaho, Kansas, Michigan, North Carolina, Texas, Utah, West Virginia, and Wisconsin.

<sup>&</sup>lt;sup>1</sup>Includes Puerto Rico.

 $<sup>^2\</sup>mathrm{Data}$  are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>3</sup>Includes flagging stone, exports, uses not specified, and uses not listed.

<sup>&</sup>lt;sup>4</sup>Includes panels and veneer, tile, blackboards, exports, uses not specified, structural and sanitary, and uses not listed.

 ${\it TABLE~8}$  DIMENSION GRANITE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY USE  $^1$ 

	200	)7	20	08
	Quantity	Value	Quantity	Value
Use	(metric tons)	(thousands)	(metric tons)	(thousands)
Rough stone:				
Rough blocks for building and construction	72,500 <sup>r</sup>	\$10,600 °r	65,700	\$13,400
Irregular-shaped stone	4,830 <sup>r</sup>	1,280 <sup>r</sup>	4,630	653
Monumental	131,000 <sup>r</sup>	20,800 r	148,000	23,500
Other <sup>2</sup>	107,000 <sup>r</sup>	21,200 <sup>r</sup>	57,400	10,000
Dressed stone:	_			
Ashlars and partially squared pieces	5,410 <sup>r</sup>	2,470 <sup>r</sup>	6,610	3,570
Slabs and blocks for building and construction	731	595	3,670	975
Monumental	65,800 <sup>r</sup>	28,300 <sup>r</sup>	51,900	23,500
Curbing	145,000 <sup>r</sup>	21,000 <sup>r</sup>	90,300	9,880
Other <sup>3</sup>	4,390 <sup>r</sup>	6,460 <sup>r</sup>	36,200	21,500
Total	536,000 <sup>r</sup>	113,000 <sup>r</sup>	464,000	107,000

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 ${\it TABLE~9}$  DIMENSION LIMESTONE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY  ${\it USE}^1$ 

	200	)7 <sup>r</sup>	20	08
	Quantity	Value	Quantity	Value
Use	(metric tons)	(thousands)	(metric tons)	(thousands)
Rough stone:				
Rough blocks for building and construction	225,000	\$29,600	232,000	\$27,400
Irregular-shaped stone	158,000	13,400	131,000	11,100
Other <sup>2</sup>	7,740	501	6,520	2,190
Dressed stone:	_			
Ashlars and partially squared pieces	145,000	22,000	136,000	23,600
Slabs and blocks for building and construction	19,700	3,140	22,500	3,100
Flagging	14,800	3,040	8,890	1,850
Other <sup>3</sup>	119,000	40,300	66,900	18,700
Total	690,000	112,000	603,000	87,900

rRevised.

 ${\it TABLE~10}$  DIMENSION MARBLE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY USE  $^{1,\,2}$ 

	2007		2008		
	Quantity	Value	Quantity	Value	
Use	(metric tons)	(thousands)	(metric tons)	(thousands)	
Rough stone:				_	
Rough blocks for building and construction	11,100 <sup>r</sup>	\$2,140 °r	16,000	\$3,350	
Other <sup>3</sup>	2,400	399	13,900	5,670	
Dressed stone <sup>4</sup>	34,100 <sup>r</sup>	12,700 <sup>r</sup>	12,700	6,100	
Total	47,600 <sup>r</sup>	15,300 <sup>r</sup>	42,600	15,100	

rRevised.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Includes exports and uses not listed.

<sup>&</sup>lt;sup>3</sup>Includes panels and veneer, tile, uses not specified, and uses not listed.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Includes exports, monumental, and uses not listed.

<sup>&</sup>lt;sup>3</sup>Includes curbing limestone, panels and veneer, tile, uses not specified, and uses not listed.

<sup>&</sup>lt;sup>1</sup>Includes Puerto Rico.

<sup>&</sup>lt;sup>2</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>3</sup>Includes monumental stone, uses not specified, and uses not listed.

<sup>&</sup>lt;sup>4</sup>Includes slabs and blocks, flagging, monumental, panels and veneer, ashlars and partially squared pieces, tile, and uses not listed.

 ${\it TABLE~11}$  DIMENSION SANDSTONE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY USE  $^1$ 

	2007 <sup>r</sup>		2008	
	Quantity	Value	Quantity	Value
Use	(metric tons)	(thousands)	(metric tons)	(thousands)
Rough stone:				
Rough blocks for building and construction	88,100	\$9,120	94,200	\$6,590
Irregular-shaped stone	9,400	1,090	8,580	1,490
Other <sup>2</sup>	44,700	7,340	36,800	6,330
Dressed stone:	<del>-</del>			
Ashlars and partially squared pieces	38,800	7,550	64,700	11,300
Slabs and blocks for building and construction	22,800	5,450	26,500	5,860
Flagging	107,000	9,300	83,100	10,000
Panels and veneer	2,950	410	10,300	1,960
Other <sup>3</sup>	18,100	6,190	22,200	6,640
Total	332,000	46,500	346,000	50,200

rRevised.

 ${\it TABLE~12}$  DIMENSION SLATE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY USE  $^1$ 

	200	)7 <sup>r</sup>	200	08
	Quantity	Value	Quantity	Value
Use	(metric tons)	(thousands)	(metric tons)	(thousands)
Flagging	3,570	\$1,900	4,860	\$2,730
Roofing	21,600	14,100	19,400	11,800
Flooring	1,050	963	789	905
Other <sup>2</sup>	1,570	1,570	1,810	2,060
Total	27,800	18,600	26,900	17,500

rRevised.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Includes flagging stone and uses not listed.

<sup>&</sup>lt;sup>3</sup>Includes tile, curbing, exports, uses not specified, and uses not listed.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Includes structural and sanitary purposes, uses not specified, and uses not listed.

## $\label{eq:table 13} \text{U.s. EXPORTS OF DIMENSION STONE, BY TYPE}^1$

(Thousand metric tons and thousand dollars)

	200	)7	200	)8	Major destination	
Type	Quantity	Value	Quantity	Value	in 2008 <sup>2</sup>	
Marble, travertine, alabaster worked <sup>3</sup>	30	8,560	49	7,740	Canada, 33%.	
Marble, travertine, crude or roughly trimmed	3	1,860	4	1,530	Canada, 58%.	
Marble, travertine, merely cut, by sawing or otherwise <sup>4</sup>	5	2,910	14	3,120	Kuwait, 18%.	
Granite, crude or roughly trimmed	106	36,000	95	32,600	China, 46%.	
Granite, merely cut by sawing or otherwise <sup>4</sup>	6	4,100	8	4,120	Canada, 52%.	
Sandstone, crude or roughly trimmed	NA	NA	NA	NA	NA.	
Sandstone, merely cut, by sawing or otherwise <sup>4</sup>	NA	NA	NA	NA	NA.	
Slate, worked and articles of slate	NA	6,440	NA	3,810	Canada, 45%.	
Slate, whether or not roughly trimmed or merely cut <sup>4</sup>	NA	678	NA	633	Canada, 59%.	
Other calcareous monumental or building stone; alabaster <sup>5</sup>	42	8,980	29	7,650	Canada, 94%.	
Other monumental or building stone <sup>6</sup>	20	4,850	10	4,440	Canada, 42%.	
Total	XX	74,300	XX	65,700		

NA Not available. XX Not applicable.

Source: U.S. Census Bureau.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>By value.

<sup>&</sup>lt;sup>3</sup>Further worked than simply cut with a flat surface.

<sup>&</sup>lt;sup>4</sup>Blocks or slabs.

<sup>&</sup>lt;sup>5</sup>Crude, roughly trimmed, or merely cut into blocks or slabs. Other than marble and travertine (includes alabaster).

<sup>&</sup>lt;sup>6</sup>Crude, roughly trimmed, or merely cut into blocks or slabs. Other than calcareous stone and alabaster, granite, sandstone, slate, dolomite, quartzite, and steatite.

 ${\it TABLE~14}$  U.S. IMPORTS FOR CONSUMPTION OF DIMENSION GRANITE, BY COUNTRY  $^1$ 

#### (Thousand dollars)

						Dressed				
						Worked granite				
						Cut to size <sup>2</sup>				
						Monumental	Building			
	Rough	Simply	Not cut	Maximum 1.5	1.5-7.5	minimum 7.5	minimum 7.5		Total	Total
Country	granite <sup>3</sup>	cut <sup>4</sup>	to size <sup>5</sup>	centimeters	centimeters	centimeters	centimeters	Other	worked	dressed
2007:	_									
Argentina	273	204	307	3	1,710	11	13	241	2,290	2,490
Brazil	8,990	76,500	96,900	7,090	302,000	67	5,200	63,400	475,000	551,000
Canada	3,780	962	903	3,870	13,900	9,100	4,320	4,540	36,600	37,500
China	8,510	36,600	22,300	23,200	140,000	10,300	17,600	67,900	281,000	318,000
Finland	29		2	3	145	4		3	157	157
India	9,890	47,600	20,900	6,500	94,000	7,230	4,010	25,200	158,000	205,000
Italy	2,580	26,500	38,700	3,120	148,000	124	5,570	49,400	245,000	272,000
Japan	- 6	2						32	32	34
Mexico	313	1,300	20		15	2	10	702	749	2,050
Norway	157		25		257		3	26	311	311
Portugal	10	160	7	6	287			189	489	649
Saudi Arabia		31	15		1,260		9	222	1,500	1,540
South Africa	1,920	26	283	3	2,010		20	217	2,530	2,560
Spain	677	2,120	1,660	262	10,700		227	2,120	14,900	17,100
Other	1,280	6,400	18,800	4,540	24,200	40	3,460	8,050	59,100	65,500
Total	38,400	198,000	201,000	48,600	738,000	26,900	40,500	222,000	1,280,000	1,480,000
2008:										
Argentina	163	19	237	18	1,130			175	1,560	1,580
Brazil	1,850	16,100	95,400	4,490	266,000	78	4,050	38,600	409,000	425,000
Canada	3,720	722	1,310	2,940	9,350	9,850	4,850	3,780	32,100	32,800
China	4,950	29,200	15,000	19,500	139,000	14,900	19,900	59,900	268,000	297,000
Finland	2				67		5	21	93	93
India	12,300	14,400	24,600	4,440	88,500	8,760	3,370	25,700	155,000	170,000
Italy	938	8,440	33,600	3,330	124,000	139	5,310	32,400	199,000	208,000
Japan	- 6	19			292	19	248	8	567	586
Mexico	- <u>-</u>	839	12	4	92		132	454	694	1,530
Norway	168	20		· 	137		6	22	165	185
Portugal		104	35	335	291			142	803	907
Saudi Arabia					249		5	48	302	302
South Africa	1,900	125	190		215		34	114	553	678
Spain	- 1,500 71	1,790	1,610	249	8,910		217	1,010	12,000	13,800
Other	1,100	5,750	7,720	4,050	18,300	237	1,810	5,090	37,200	42,900
Total	27,200	77,500	180,000	39,300	657,000	34,000	39,900	167,000	1,120,000	1,190,000
Zero	27,200	11,500	100,000	39,300	037,000	54,000	39,900	107,000	1,120,000	1,170,000

<sup>--</sup> Zero.

Source: U.S. Census Bureau.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>One or more faces worked more than simply cut.

<sup>&</sup>lt;sup>3</sup>Normal quarry products. Includes crude or roughly trimmed and roughly cut by sawing or otherwise; Harmonized Tariff Schedule of the United States (HTS) codes 2516.11.0000, 2516.12.0030, and 2516.12.0060.

<sup>&</sup>lt;sup>4</sup>Simply cut with a flat even surface; HTS code 6802.23.0000.

<sup>&</sup>lt;sup>5</sup>Only one face worked more than simply cut; HTS code 6802.93.0010.

TABLE 15  $\hbox{U.s. IMPORTS FOR CONSUMPTION OF MAJOR CATEGORIES OF DIMENSION MARBLE AND OTHER CALCAREOUS \\ \hbox{STONE, BY COUNTRY}^1$ 

			Dres	ssed					
	Marble	, slabs <sup>2</sup>	Marble,	other <sup>3</sup>	Other calcar	reous stone <sup>4</sup>	Rough marble <sup>5</sup>		
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	
Country	(metric tons)	(thousands)	(metric tons)	(thousands)	(metric tons)	(thousands)	(metric tons)	(thousands)	
2007:									
Brazil	3,670	3,100	461	424	2,040	2,210	243	119	
Canada	77	124	1,180	2,960	17,600	5,700	17	44	
China	48,700	36,600	79,300	69,600	18,700	17,200	2,100	1,600	
France	238	573	626	3,180	110,000	15,600	7	78	
Greece	9,520	13,000	5,820	10,100	1,020	1,290	16	40	
India	10,400	8,660	3,750	5,550	3,100	1,910	186	204	
Israel	6,920	5,740	6,960	7,390	41,200	22,300	380	253	
Italy	76,600	126,000	48,200	89,600	31,700	39,400	1,630	2,550	
Mexico	1,460	1,730	8,420	10,200	31,800	12,800	794	1,370	
Portugal	1,800	2,160	1,920	2,630	19,100	15,100	201	107	
Spain	46,500	46,100	34,200	37,000	49,900	27,400	1,220	1,050	
Taiwan	924	913	1,730	2,710	358	400	1	3	
Turkey	30,100	22,200	63,800	52,600	22,900	17,600	1,510	540	
Other	21,400	17,500	28,800	27,800	263,000	42,300	263	351	
Total	258,000	284,000	285,000	322,000	612,000	221,000	8,560	8,310	
2008:									
Brazil	3,970	3,970	292	322	1,520	1,780	31	112	
Canada	158	335	998	2,490	8,430	7,870	5	14	
China	44,400	36,300	55,900	64,900	17,000	16,800	1,940	1,520	
France	108	250	349	913	61,700	17,100	5	53	
Greece	6,120	11,700	7,440	8,900	892	1,530	1	8	
India	6,170	6,300	3,160	6,330	4,810	3,720	37	102	
Israel	6,440	4,510	6,230	5,820	32,500	17,300	1,690	66	
Italy	67,500	125,000	48,700	85,800	92,500	35,800	511	1,520	
Mexico	1,160	1,120	5,900	8,160	30,900	10,500	69	73	
Portugal	2,310	3,050	1,830	3,600	28,500	18,100			
Spain	29,600	32,200	25,200	28,500	98,000	19,400	658	524	
Taiwan	815	895	1,690	2,820	177	261			
Turkey	22,600	20,400	71,500	60,800	192,000	12,000	145	189	
Other	17,000	17,500	26,600	27,700	521,000	41,200	533	252	
Total	208,000	263,000	256,000	307,000	1,090,000	203,000	5,630	4,430	

<sup>--</sup> Zero.

Source: U.S. Census Bureau; data adjusted by the U.S. Geological Survey.

 $<sup>^{1}\</sup>mathrm{Data}$  are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Worked more than simply cut with a flat surface; Harmonized Tariff Schedule of the United States (HTS) code 6802.91.0500.

<sup>&</sup>lt;sup>3</sup>Merely cut by sawing or otherwise.

<sup>&</sup>lt;sup>4</sup>Worked more than simply cut with a flat surface, other than marble and travertine; HTS code 6802.92.0000.

<sup>&</sup>lt;sup>5</sup>Simply cut by sawing or otherwise into rectangular blocks or slabs; HTS code 2515.12.1000.

 $\label{table 16} {\it TABLE~16}$  U.S. IMPORTS FOR CONSUMPTION OF DIMENSION STONE, BY TYPE  $^1$ 

			2007		2008	
			Value		Value	Major source
Type		Quantity	(thousands)	Quantity	(thousands)	for 2008 <sup>2</sup>
Calcareous stone, other <sup>3</sup>	netric tons	NA	NA	NA	NA	NA.
Marble and alabaster <sup>4</sup>	do.	25,600	\$26,100	18,600	\$23,400	Italy, 34%.
Sandstone, cut, by sawing or otherwise <sup>5</sup>	do.	NA	NA	NA	NA	Italy, NA.
Slate, roofing million s	quare feet	14	10,300	11	8,560	Canada, 31%.
Slate, roughly trimmed or simply cut <sup>5</sup>	do.	16,500	5,740	7,980	3,260	China, 63%.
Slate, worked and articles of slate, and other <sup>6</sup>	do.	NA	112,000	NA	89,200	India, 42%.
Travertine, monumental or building stone and articles thereof $^7$	do.	40,800	26,200	45,400	23,100	Turkey, 28%.
Travertine, worked monumental or building stone <sup>8</sup>	do.	87,900	47,400	45,100	32,100	Turkey, 32%.
Other stone, monumental or building stone <sup>9</sup>	do.	NA	NA	NA	NA	Turkey, NA.

do. Ditto. NA Not available.

Source: U.S. Census Bureau.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits. Table does not include totals shown on tables 14 and 15.

<sup>&</sup>lt;sup>2</sup>By value.

<sup>&</sup>lt;sup>3</sup>Simply cut with a flat surface, other than marble, travertine, and alabaster.

<sup>&</sup>lt;sup>4</sup>Simply cut with a flat surface.

<sup>&</sup>lt;sup>5</sup>Rectangular blocks or slabs.

<sup>&</sup>lt;sup>6</sup>Other than roofing, including agglomerated slate.

<sup>&</sup>lt;sup>7</sup>Simply cut with a flat surface, other than tiles and granules.

<sup>&</sup>lt;sup>8</sup>Dressed or polished but not further worked.

<sup>&</sup>lt;sup>9</sup>Simply cut with a flat surface, other than granite, calcareous stone, alabaster, slate, dolomite, quartzite, and steatite.