

# 2007 Minerals Yearbook

STONE, CRUSHED [ADVANCE RELEASE]

# STONE, CRUSHED

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Domestic survey data and tables were prepared by Susan M. Weaver, statistical assistant.

Stone is one of the most accessible natural resources of the Earth and one of the fundamental building blocks of our society. It has been used from the earliest times of our civilization for a variety of uses that have increased in number and complexity with time and technological progress. Today, in its crushed form, stone is a major basic raw material for the construction industry, as well as agriculture and other industries that use complex chemical and metallurgical processes. Despite the relatively low, but increasing, unit value of its basic products, the crushed stone industry is a major contributor to and an indicator of the economic well-being of the Nation. Construction aggregates are defined as the combination of crushed stone and construction sand and gravel. The construction sand and gravel industry is reviewed in a separate chapter, and both mineral commodities will probably be included in any review of the national or State aggregates industry.

A total of 1.60 billion metric tons (Gt) of crushed stone was produced for consumption in the United States in 2007, nearly 10% less than the total production of 2006. This was the lowest level of crushed stone produced for consumption in the United States since 2003. The value of the total crushed stone produced in the United States in 2007 was \$13.9 billion, a slight decrease compared with the 2006 total (table 1). The average unit price for crushed stone increase 8% compared with the average unit price for 2006. The increase in unit prices offset the decrease in production to keep the value of the total crushed stone produced at about last year's value.

About 70% of crushed stone production continued to be limestone and dolomite followed by, in descending order of tonnage, granite, traprock, miscellaneous stone, sandstone and quartzite, marble, volcanic cinder and scoria, slate, shell, and calcareous marl (table 2).

Foreign trade of crushed stone remained small. Exports decreased in 2007 by 10% to 1.02 million metric tons (Mt) compared with 1.14 Mt in 2006, but the value increased by 9% to \$62.5 million compared with \$57.3 million in 2006 (tables 1, 17). Imports of crushed stone, including calcium carbonate fines, decreased slightly to 19.5 Mt, but the value increased by 3% to \$212 million compared with the 2006 totals (tables 1, 18). Apparent domestic consumption of crushed stone, which is defined as production for consumption (sold or used) plus imports minus exports, decreased by 9% to 1.62 Gt compared with 1.79 Gt in 2006 because of the decrease in crushed stone produced for consumption.

## **Production**

Domestic production data for crushed stone were derived by the U.S. Geological Survey (USGS) from voluntary surveys of U.S. producers. In 2007, a total of 1,447 companies produced or sold crushed stone from 3,562 operations with 3,710 quarries and 193 sales and/or distribution sites. Of the 3,562 active operations, 2,324 operations reported their production or sales to the USGS, and their total production was 1.28 Gt (80% of the U.S. total). Of the 2,324 reporting operations, 1,007 operations, with 1,002 quarries and 79 sales yards owned by 262 companies, did not report a breakdown by end use. Their total production was 493 Mt (31% of the U.S. total) and is included in table 9 under "Unspecified, reported" uses.

Production of the nonresponding quarries was estimated by using employment data provided by the Mine Safety and Health Administration (MSHA). The estimated output of 1,239 nonrespondent operations with 1,249 quarries and 7 sales yards owned by 827 companies was 324 Mt (20% of the U.S. total) and is included in table 9 under "Unspecified, estimated" uses.

A total of 193 sales yards in 30 States was active in 2007, and their total output was 68.2 Mt. Information regarding the number of active operations, active quarries, type of processing plants, and number of sales yards by State is provided in table 16.

Crushed stone was produced in every State except Delaware. Starting with 2005, Delaware's production is included in the U.S. total because of sales yards that reported sales of crushed stone in the State. The 10 leading producing States were, in descending order of tonnage, Texas, Pennsylvania, Florida, Missouri, Georgia, Illinois, North Carolina, Ohio, Virginia, and Tennessee. The combined production of the 10 leading States decreased by 10% and was 846 Mt, more than one-half of the national total.

There are 86 underground mines included in the total number of active operations, and they produced 68.6 Mt of crushed stone in 2007. Active underground mines were located in 18 States. The five leading States were, in descending order of tonnage, Kentucky, Missouri, Illinois, Nebraska, and Iowa. Their combined production was 49.6 Mt (72% of the total U.S. crushed stone produced underground).

A total of 806 operations were either idle or presumed to have been idle in 2007 because no production report was received and no employment information was available to estimate their production. Since the 2006 survey, 262 operations have been closed. Most of the idle or closed operations were small, temporary quarries, some of which were operated by State or local governments. Operations in U.S. territories are not included in the above count.

Of the total 1.60 Gt of crushed stone produced for consumption in the United States in 2007, 69% was limestone and dolomite, 15% was granite, 7% was traprock, 4% was miscellaneous stone, and 3% was sandstone and quartzite. The remaining 2% was shared, in descending order of tonnage, by marble, volcanic cinder and scoria, slate, shell, and calcareous

marl. These percentages were calculated on the total amount of crushed stone produced for consumption that was reported, including amounts that were withheld to avoid disclosing company proprietary data.

A comparison by geographic region indicates that in 2007 the production for consumption of crushed stone decreased by about 8% to 10% in all four regions (table 3). The largest percentage decrease was in the South (10%) compared with production in 2006. In 2007, the South continued to lead the Nation in the production of crushed stone, with 787 Mt, followed by the Midwest with 413 Mt. The South and Midwest regions, composing 28 of the 48 contiguous States, accounted for 75% of the total U.S. crushed stone output.

A comparison by geographic division indicates that, in 2007, the production for consumption of crushed stone decreased in eight of the nine divisions compared with that of 2006. The major decreases in percentages were recorded in the South Atlantic (16%), New England (14%), and Pacific (12%) divisions. Of the nine geographic divisions, the South Atlantic led the Nation in the production of crushed stone with 384 Mt, followed by the East North Central with 253 Mt and the West South Central with 231 Mt (table 3). A small increase in production for consumption of crushed stone was recorded in the West South Central division.

The leading U.S. producing companies in 2007 were, in descending order of tonnage, Vulcan Materials Co.; Martin Marietta Aggregates; Lehigh Hanson; Oldcastle Materials, Inc.; CEMEX, Inc.; Lafarge North America Inc.; Holcim/Aggregate Industries; Rogers Group, Inc.; Carmeuse North America; and Luck Stone Corp. The combined production of the top 10 companies was 789 Mt (about one-half of the national total). The combined production of the top 100 companies was 1.20 Gt (three-quarters of the national total). This means that the combined production of the companies ranked from 11th to 100th only accounted for about one-half of the production of the top ten.

A review of production by size of operation at the national level indicates that, in 2007, 820 Mt of crushed stone (51% of the total crushed stone) was produced by 472 operations reporting more than 1 million metric tons per year; 396 Mt was produced by 608 operations reporting between 500,000 and 999,999 metric tons per year (t/yr); and 347 Mt was produced by 1,419 operations reporting between 100,000 and 499,999 t/yr. The production by size of operation information also indicates that 76% of total crushed stone produced in the United States in 2007 came from operations that produced more than 500,000 t/yr (table 5a). By geographic region, in 2007, the South had 1,254 active operations, followed by the Midwest with 1,023 active operations, and the West with 793 active operations (table 5b).

Merger and acquisition activity in the U.S. construction aggregates industry included three major purchases in 2007. Foreign companies accounted for most of the industry highlights, completing two of the three deals totaling \$30 billion. The first major acquisition was purchase of Australian based Rinker Group Ltd. by CEMEX, S.A.B. de C.V. of Monterrey, Mexico. Both companies operated large U.S. construction aggregates divisions which, when combined, will probably represented about 4% of the U.S. market.

Second was the acquisition of a British company, Hanson PLC, by a German company, HeidelbergCement AG. The deal was valued at nearly \$16 billion and set the record as the largest purchase in the construction aggregates industry (Aggregates Manager, 2007b). HeidelbergCement has operated a U.S. division since the purchase of Lehigh Cement in 1977. The new U.S. construction aggregates division was named Lehigh Hanson and its headquarters was in Dallas, TX.

The last major transaction of 2007 was the addition of Florida Rock Industries Inc. to Vulcan Materials Co., the leading U.S. aggregates producer. The deal, which took almost a year to complete, was finalized in November 2007. The transaction combined two industry giants with expectations to provide long-term stability and market strength in key growth regions for Vulcan Materials (Aggregates Manager, 2007a). The combination of the two companies also increased the gap between the top and second place positions in the market share of the construction aggregates business.

The aggregate industry also completed a number of small deals in 2007. The year began with Vulcan Materials buying a quarry in North Carolina from Burke County Stone and a quarry in Illinois from Avery Gravel Co. Also in January, Rinker acquired JR & Sons Ready Mix in southern Utah. National Lime and Stone Co. purchased quarries in Ohio and other assets from Suever Stone Co. In August, Florida Rock Industries Inc. purchased Freeport Aggregate Ltd., a Bahamian construction aggregates producer. The acquisition included approximately 25 million tons of reserves and was expected produce up to 300,000 t/yr of construction aggregates (Aggregates Manager, 2007c).

In the fall of 2007, additional acquisitions were completed. The parent company of Oldcastle Materials, Inc. (CRH plc) acquired Cessford Construction Co., Conrad Yelvington Distributors, Inc., Eugene Sand and Gravel, Inc., and McMinn's, Inc. group of companies. Conrad Yelvington is the leading rail distributor of aggregates in the southeast of the United States and has 327 rail-served distribution terminals in Alabama, Florida, Michigan, and Mississippi (Aggregates Manager, 2007d). Cessford Construction, Eugene Sand and Gravel, and McMinn's operated several aggregates mines in addition to asphalt and concrete plants in four States across the country. It was also announced that CRH would spend \$250 million to buy certain assets in Arizona and Florida that Cemex divested during the acquisition of Rinker as required by the U.S. Department of Justice. In September, Lafarge acquired four aggregate quarries from H.B. Mellott Estate, Inc. Near yearend 2007, Carmeuse North America announced the acquisition of Oglebay Norton

Production of crushed stone by type is detailed below. *Calcareous Marl.*—Output of calcareous marl increased slightly compared with that of 2006 to 2.8 Mt valued at \$18.8 million (table 2). Marl was produced by six companies with six quarries in three States. The leading producers were, in descending order of tonnage, Lafarge, Giant Group Ltd., and Capitol Aggregates, Ltd.

**Dolomite.**—Production of dolomite decreased by 7% compared with the total for 2006 to 72.5 Mt valued at \$562 million (table 2). Crushed dolomite production was reported by

75 companies at 138 operations with 165 quarries in 29 States. An additional undetermined amount of dolomite is included in the total crushed limestone, as explained in the limestone portion of the "Production" section.

The leading producing States were, in descending order of tonnage, Illinois, Pennsylvania, New York, Michigan, and Indiana; the total production of these five States was 56.6 Mt (table 6). The leading producers were, in descending order of tonnage, Lehigh Hanson, Oldcastle, Carmeuse, Vulcan Materials, and Stabler Companies, Inc. Their combined total production was 42.8 Mt.

Granite.—The output of crushed granite decreased by 11% compared with that of 2006 to 241 Mt valued at \$2.62 billion (table 2). Crushed granite was produced by 146 companies at 408 operations with 394 quarries in 35 States. The leading producing States were, in descending order of tonnage, Georgia, North Carolina, Virginia, South Carolina, and California; the total production of these five States was 180 Mt (75% of the U.S. output) (table 7). The leading producers were, in descending order of tonnage, Vulcan Materials, Martin Marietta, Lehigh Hanson, Oldcastle, and Lafarge. Their combined total production was 168 Mt (69% of the U.S. granite total).

Limestone.—The output of crushed limestone, including some dolomite, decreased by 9% compared with that of 2006 to 1.02 Gt valued at \$8.28 billion (table 2). Limestone was produced by 761 companies at 1,968 operations with 2,052 quarries in 47 States. In addition, 35 companies with 49 operations and 49 quarries reported producing limestone and dolomite from the same quarries. Their production of about 27.6 Mt of limestone and dolomite combined is included with the limestone listed in table 2. The limestone totals listed in this chapter, therefore, include an undetermined amount of dolomite in addition to the dolomite reported separately.

The leading producing States were, in descending order of tonnage, Texas, Florida, Missouri, Ohio, and Tennessee; the total production of these five States was 429 Mt (42% of the total U.S. output) (table 6). The leading producers of limestone were, in descending order of tonnage, Vulcan Materials, Martin Marietta, Lehigh Hanson, Oldcastle, and CEMEX. Their combined total production was 346 Mt.

Marble.—Production of crushed marble decreased by 4% compared with the total for 2006 to 7.6 Mt valued at \$71.1 million (table 2). Crushed marble was produced by 16 companies with 25 operations and 24 quarries in 14 States. The leading producers of crushed marble were, in descending order of tonnage, Omya, Inc.; Imerys Marble, Inc.; Boxley Materials Co.; Vulcan Materials; and Huber Engineered Materials. Their combined total production was 83% of the U.S. marble total.

Miscellaneous Stone.—This category includes three different types of miscellaneous crushed stone production. The first type is a crushed stone which is reported by the company as "other" on the survey form or as a type of stone not listed on table 2. The second type is production from a company or operation that is new to the survey and the type of stone being mined is unknown. The first year a new operation is on the survey, it usually does not respond and its production must be estimated. The type of stone is updated when a response is received from the operation and the data are revised for the next report. The

third type is production with a known rock type but the amount must be concealed to protect a company's proprietary data. This concealed amount is added to the quantity of miscellaneous stone produced in that State and then published.

Sandstone and Quartzite.—The output of crushed sandstone and quartzite decreased by 11% compared with the total for 2006 to 47.7 Mt valued at \$398 million (table 2). Crushed sandstone was produced by 113 companies at 163 operations with 156 quarries in 26 States, while quartzite was produced by 31 companies at 41 operations with 45 quarries in 17 States.

The leading producing States were, in descending order of combined tonnage of sandstone and quartzite, Pennsylvania, Arkansas, New York, Colorado, and South Dakota. Their combined total production was 34.9 Mt (73% of the U.S. output) (table 7). The leading producers of sandstone and quartzite were, in descending order of tonnage: Oldcastle; Martin Marietta; Haines & Kibblehouse, Inc.; Lafarge; and Pine Bluff Sand and Gravel Co. Their combined total production was 20.4 Mt (43% of the U.S. sandstone and quartzite total).

Shell.—Shell is derived mainly from fossil reefs or oyster shell banks. The output of crushed shell decreased by 67% compared with the 2006 total to 2.8 Mt valued at \$24.2 million (table 2). Crushed shell was produced by six companies with seven quarries in three States. The leading producers, in descending order of tonnage, were Schroeder-Manatee Ranch, Inc. and Stewart Mining Industries, Inc.

Slate.—The output of crushed slate decreased by 19% compared with that of 2006 to 3.8 Mt valued at \$37.0 million (table 2). Crushed slate was produced by 35 companies at 38 quarries in 12 States. About 40% of the total U.S. output of the crushed slate was produced in Pennsylvania. The leading producers were, in descending order of tonnage, Martin Marietta, McCartney Construction Co., Inc.; and Joseph Zawisky LLC. Their combined total production was 1.6 Mt (36% of the U.S. slate total).

*Traprock.*—Production of crushed traprock decreased by 13% compared with the total for 2006 to 105 Mt valued at \$1.03 billion (table 2). Traprock was produced by 195 companies at 333 operations with 372 quarries in 27 States. The leading producing States were, in descending order of tonnage, Oregon, New Jersey, Virginia, California, and Washington; these five States produced 59.5 Mt (57% of U.S. output) (table 7). Leading producers were, in descending order of tonnage, Oldcastle, Vulcan Materials, Luck Stone, MDU Resources Group, and Trap Rock Industries. Their combined total production was 43.1 Mt (39% of the U.S. traprock total).

Volcanic Cinder and Scoria.—Production of volcanic cinder and scoria increased by 7% compared with the total for 2006 to 6.6 Mt valued at \$48.8 million (table 2). Volcanic cinder and scoria were produced by 33 companies from 49 operations with 51 quarries in 13 States. The top producing State was Wyoming which produced 62% of U.S. output (table 8). The two leading producers, in descending order of tonnage, First Energy Service, Inc. and the U.S. Forest Service, accounted for about 60% of the 2007 production of crushed volcanic cinder and scoria.

#### Consumption

Crushed stone production reported to the USGS is actually material that was either sold to other companies or consumers or was used by the producers. Stockpiled production is not included in the reported quantities. The "sold or used" tonnage, therefore, represents the amount of production released for domestic consumption or export in a given year. Because some of the crushed stone producers did not report a breakdown by end use, their total production is included in the "Unspecified, reported" use category. The estimated production of nonrespondents is included in the "Unspecified, estimated" use category.

In 2007, U.S. apparent consumption of crushed stone, which is defined as U.S. production plus imports minus exports, was 1.62 Gt, a 9% decrease compared with the apparent consumption in 2006. Of the 1.62 Gt of crushed stone consumed, 493 Mt (31%) was "Unspecified, reported," and 324 Mt (20%) was "Unspecified, estimated." Of the remaining 784 Mt reported by uses, 82% was used as construction aggregate, mostly for highway and road construction and maintenance as well as a wide variety of building and other nonbuilding construction; 11% for cement manufacturing; 2% for lime manufacturing; 2% for agricultural uses; and 2% for special and miscellaneous uses and products (table 9). It is indicated that, in marketing analysis or use-pattern studies, the quantities included in unspecified uses be prorated and added to the reported uses by applying the above percentages calculated for the reported quantities. Using this procedure, the analyst assumes that the breakdown by uses of the unspecified uses is similar to that of the reported uses.

In 2007, the value of the total construction put in place decreased by 3% compared with that of 2006 to \$1,140 billion, as reported by the U.S. Census Bureau (2008). The value of total private construction decreased by 7% to \$850 billion, while the value of total public construction increased by 12% to \$287 billion. The value of private construction dropped to its lowest level since 2004. The increase of 12% in the public construction sector was the largest increase in the past 10 years.

**Dolomite.**—Of the 72.5 Mt of crushed dolomite consumed, 29.4 Mt (41%) was in "Unspecified, reported" uses, and 3.7 Mt (5%) was in "Unspecified, estimated" uses. Of the remaining 39.4 Mt of crushed dolomite reported by uses by the producers, 89% was used as construction aggregates, 5% was used for chemical and metallurgical applications, and 4% was used for agricultural use. An additional undefined amount of dolomite consumed in a variety of uses, mostly construction aggregates, is reported with limestone (table 10).

Additional detailed information for total combined limestone and dolomite by State and major uses is provided in table 11.

*Granite.*—Of the 241 Mt of crushed granite consumed, 103 Mt (43%) was in "Unspecified, reported" uses, and 23.1 Mt (10%) was in "Unspecified, estimated" uses. Nearly all the remaining 114 Mt was used as construction aggregates (table 12).

*Limestone.*—Of the 1.02 Gt of crushed limestone consumed, 274 Mt (27%) was in "Unspecified, reported" uses, and 218 Mt (21%) was in "Unspecified, estimated" uses. Of the

remaining 526 Mt of crushed limestone reported by uses, 76% was used as construction aggregate, 16% was used for cement manufacturing, 3% was used for lime manufacturing, 2% was used for agricultural use, and 2% was used for special and miscellaneous uses and products (table 10).

*Marble.*—Of the 7.6 Mt of crushed marble consumed, 5.7 Mt (76%) was in "Unspecified, estimated uses." Nearly all of the remaining 1.9 Mt of crushed marble reported by uses by the producers was used as construction aggregates (table 13).

*Miscellaneous Stone.*—Of the 94.1 Mt of miscellaneous crushed stone consumed, 38.3 Mt (41%) was in "Unspecified, reported" uses, and 29.8 Mt (32%) was in "Unspecified, estimated" uses. Construction aggregates accounted for more than 89% of the remaining 26.0 Mt reported by uses by the producers (table 13).

Sandstone and Quartzite.—Of the 47.7 Mt of crushed sandstone and quartzite consumed, 10.2 Mt (21%) was in "Unspecified, reported" uses, and 18.6 Mt (39%) in "Unspecified, estimated uses." Nearly all the remaining 18.9 Mt of crushed sandstone and quartzite reported by uses by the producers was used as construction aggregates (table 12).

*Traprock.*—Of the 105 Mt of crushed traprock consumed, 31.8 Mt (30%) was in "Unspecified, reported" uses, and 21.2 Mt (20%) was in "Unspecified, estimated" uses. Nearly all the remaining 51.9 Mt was used as construction aggregates (table 12).

Volcanic Cinder and Scoria.—Of the 6.6 Mt of volcanic cinder and scoria consumed, 4.7 Mt (72%) was in "Unspecified, reported" uses, and 1.2 Mt (18%) was in "Unspecified, estimated" uses. Nearly all the remaining 678,000 metric tons of crushed volcanic cinder and scoria was used as construction aggregates (table 13).

Additional information regarding production and consumption of crushed stone by type of rock and major uses in each State and the State districts may be found in the USGS Minerals Yearbook, volume II, Area Reports: Domestic.

## Recycling

As the recycling of most waste materials increases, aggregates producers are recycling more cement concrete and asphalt concrete materials recovered from construction projects to produce concrete and asphalt aggregates and other aggregate materials, especially fill and road base. The recycling of cement concrete is done at some quarries and increasingly at sales yards or distribution sites, whereas asphalt concrete is recycled mostly at the construction sites. The annual survey of crushed stone producers collects information on recycling of cement and asphalt concretes produced by the crushed stone producers only. These amounts represent a small percentage of the total recycled cement and asphalt concretes because the recycling of these materials is done mostly by construction or demolition companies, and those companies are not surveyed by the USGS.

Asphalt Concrete.—A total of 3.1 Mt of asphalt concrete valued at \$26.8 million was recycled in 2007 by 58 companies in 29 States. The tonnage of recycled asphalt concrete, reported to the USGS, increased by 92% compared with the 2006 total (tables 14). The leading recycling States were, in descending

order of tonnage, Illinois, Pennsylvania, Florida, Massachusetts, and Texas. Their combined total represented 67% of the U.S. total

Cement Concrete.—A total of 2.5 Mt of portland cement concrete valued at \$17.4 million was recycled by 50 companies in 22 States. This tonnage represents a 15% decrease in the amount reported to the USGS compared with that of 2006 (tables 15). The leading recycling States were, in descending order of tonnage, Minnesota, Illinois, Nevada, California, and Massachusetts. Their combined total represented 77% of the U.S. total.

#### **Prices**

Prices in this chapter are the average annual free on board plant prices, usually at the first point of sale or captive use, as reported by the crushed stone producing companies. This value does not include transportation from the plant or yard to the consumer. It does, however, include all costs of mining, processing, in-plant transportation, overhead costs, and profit. In 2006 and 2007, about three-quarters of the operations responding to the annual survey reported the dollar value of their production. The average unit value for operations reporting production and value in 2007 was \$8.72 per metric ton. This was an increase of 6.5% compared with the average unit value of \$8.19 per ton in 2006. The annual reports of the top U.S. producing companies reported a 7% to 13% price increase in 2007 compared with prices in 2006. For those operations that reported production only, the unit values of total production or specific end uses were estimated based on what other operations in the same State reported. The average unit value for specific end uses within a State was used in the estimation of value for operations reporting specific end uses. The State average was used in the estimation for operations reporting a total production but not total value.

Additional information regarding prices of crushed stone by type of rock and uses in the United States and each State and the State districts may be found throughout the tables included in this chapter as well as in the USGS Minerals Yearbook, volume II, Area Reports: Domestic.

#### **Transportation**

For 865 Mt of the 1.60 Gt of crushed stone produced for consumption in 2007, no means of transportation was reported by the producers. Of the remaining 736 Mt of crushed stone, 79% was reported as being transported by truck from the quarry or the processing plant to the first point of sale or use; 5% by rail and 4% by waterway. About 72.0 Mt of the specified production was reported as not having been transported and, therefore, is assumed to have been used onsite.

Shipment by truck remains the most widely used method of transportation for crushed stone. The significant increase in the number of sales and distribution yards in the past few years, and the increase in the volume of crushed stone going through these sites have had a positive impact on the industry and the communities they serve. Distribution sites located near metropolitan areas significantly reduce the distance most trucks

must travel to pick up and deliver crushed stone. Therefore, the transportation costs are reduced, as is the impact of heavy traffic on the infrastructure and the environment. Sales yards serve both to distribute products and, increasingly, as recycling sites. This provides efficiency for the industry while helping protect the environment.

#### **Foreign Trade**

The widespread distribution of domestic deposits of stone suitable for mining as crushed stone, the large number of existing active operations around the country, and the high cost of transportation limit foreign trade to mostly local transactions across international boundaries. U.S. imports and exports continue to be small, representing sligthly more than 1% of domestic consumption.

Information on imports of crushed stone from two sources is used for this report. Import and export data from the U.S. Census Bureau are used (tables 1, 17-18). Companies also provide import data when reporting the amount sold or used for consumption at each operation to the annual survey. The tonnage reported is attributed to the State where it is first sold or used. Crushed stone imported to Florida from Mexico is counted in the total of crushed stone sold or used in Florida (table 4). This is the same process used for large amounts of crushed stone which is transported from one State to another. Crushed stone mined in Kentucky and shipped down the Mississippi River to Louisiana is counted in the total of crushed stone sold or used in Louisiana.

*Exports.*—Exports of crushed stone in 2007 decreased by 10% to 1.02 Mt compared with the total of 1.14 Mt in 2006, but the value increased by 9% to \$62.5 million. In 2007, exports of crushed limestone for cement manufacturing averaged a unit value of \$26.92 per ton (table 17).

*Imports.*—Imports of crushed stone decreased slightly to 19.5 Mt compared with those of 2006, but the value increased slightly to \$212 million. Of the imported crushed stone, 63% was limestone used as construction aggregate, as flux stone, and in cement manufacturing. Imports of natural calcium carbonate fines increased in value to \$1.4 million in 2007 from \$471,000 in 2006 (table 18).

#### Outlook

The crushed stone industry is a cyclical business, reacting to the levels of activity in public infrastructure projects, commercial and residential construction markets, and other types of construction. The residential construction slowdown in the United States was well documented and contributed to decreased consumption of crushed stone. The residential construction market was expected to decline further in 2008. Adding stress to the industry were increases in fuel costs, which continued throughout most of the 2007, and the financial instability caused by problems experienced in the residential building and mortgage industries.

Many construction aggregates producers expected that their production levels would be flat or slightly decrease, resulting in a conservative and cautious outlook in 2007. This cautious

outlook was expected to continue into 2008, with the major producing companies making conservative predications for the year. Industry experts indicated that crushed stone consumed in commercial construction combined with the multiyear nature of highway and infrastructure projects would offset continued decreases in residential construction. Production of crushed stone was expected to decrease at a similar rate to what the market experienced in 2007, while prices continued to increase since input costs are not expected to decrease. Consumption of crushed stone is expected to decrease to lower than 1997 levels or 1.34 Gt.

#### **References Cited**

Aggregates Manager, 2007a, Mergers & acquisitions: Aggregates Manager, v. 12, no. 5, May, p. 9.

Aggregates Manager, 2007b, Mergers & acquisitions: Aggregates Manager, v. 12, no. 7, July, p. 12.

Aggregates Manager, 2007c, Mergers & acquisitions: Aggregates Manager, v. 12, no. 9, September, p. 10.

Aggregates Manager, 2007d, Mergers & acquisitions: Aggregates Manager, v. 12, no. 11, November, p. 11.

U.S. Census Bureau, 2008, Annual value of construction put in place: U.S. Census Bureau, September 28, p. 1-2. (Accessed September 19, 2008, at http://www.census.gov/const/www/totpage.html.)

#### GENERAL SOURCES OF INFORMATION

#### **U.S. Geological Survey Publications**

Construction Stone. Ch. in United States Mineral Resources, Professional Paper 820, 1973.

Limestone and Dolomite. Ch. in United States Mineral Resources, Professional Paper 820, 1973.

Natural Aggregate—Building America's Future. Circular 1110, 1990.

Natural Aggregates—Foundation of America's Future. Fact Sheet 144-97, 1997.

Natural Aggregates of the Conterminous United States. Bulletin 1594, 1988.

Sand and Gravel, Construction. Ch. in Mineral Commodity Summaries, annual.

#### Other

Aggregate Handbook. National Stone Association, 1991. Aggregates Manager.

Aggregates—Sand, Gravel, & Crushed Rock Aggregates for Construction Purposes. The Geological Society, 1985.

Calcium Carbonate—From the Cretaceous Period into the 21st Century. Tegethoff, F.W., Birkhäuser Verlag, 2001.

Concrete Manual, A Water Resources Publication. U.S. Department of the Interior, Bureau of Reclamation, 1975.

Construction Aggregates. Mining Engineering, annual review of industrial mineral commodities.

Crushed Stone. Ch. in Mineral Facts and Problems, U.S. Bureau of Mines Bulletin 675, 1985.

Geology of Nonmetallics. Metal Bulletin Inc., 1984.

Handbook of Concrete Aggregates. Noyes Publications, 1983. Industrial Minerals.

Lime and Limestone—Chemistry and Technology, Production and Uses. Wiley-VCH, 1998.

National Stone, Sand and Gravel Association.

Pit & Quarry.

Rock Products.

Stone, Crushed. Ch. in Industrial Minerals and Rocks (7th ed.), Society for Mining, Metallurgy, and Exploration, Inc., 2006.

TABLE 1 SALIENT CRUSHED STONE STATISTICS<sup>1</sup>

	2003	2004	2005	2006	2007
Sold or used by producers: <sup>2</sup>					
Quantity	1,530,000	1,630,000	1,700,000	1,770,000 <sup>r</sup>	1,600,000
Value	9,060,000	9,890,000	12,400,000	14,200,000 <sup>r</sup>	13,900,000
Exports:					
Quantity	1,010	1,280	1,260	1,140	1,020
Value	45,600	54,500	50,500	57,300	62,500
Imports for consumption: <sup>3</sup>					
Quantity	15,300	18,600	21,000	19,800	19,500
Value	143,000	179,000 <sup>r</sup>	194,000	206,000	212,000

Revised.

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

<sup>&</sup>lt;sup>2</sup>Does not include American Samoa, Guam, Puerto Rico, and the U.S. Virgin Islands.

<sup>&</sup>lt;sup>3</sup>Excludes precipitated calcium carbonate.

 ${\rm TABLE}~2$  CRUSHED STONE SOLD OR USED IN THE UNITED STATES, BY  ${\rm TYPE}^{1,\,2}$ 

		200	)6 <sup>r</sup>			200	7	
		Quantity			Quantity			
	Number	(thousand	Value	Unit	Number	(thousand	Value	Unit
Type	of quarries	metric tons)	(thousands)	value	of quarries	metric tons)	(thousands)	value
Limestone <sup>3</sup>	2,102	1,120,000	\$8,420,000	\$7.52	2,123	1,020,000	\$8,280,000	\$8.13
Dolomite	134	78,000	575,000	7.38	137	72,500	562,000	7.75
Marble	21	7,900	77,600	9.83	21	7,580	71,100	9.38
Calcareous marl	4	2,750	10,500	3.81	3	2,820	18,800	6.68
Shell	5	8,640	73,900	8.55	5	2,850	24,200	8.47
Granite	389	270,000	2,620,000	9.71	384	241,000	2,620,000	10.88
Traprock	331	120,000	1,130,000	9.43	361	105,000	1,030,000	9.82
Sandstone and quartzite <sup>4</sup>	175	53,900	414,000	7.68	188	47,700	398,000	8.35
Slate	34	4,710	43,900	9.33	33	3,820	37,000	9.68
Volcanic cinder and scoria	45	6,190	41,100	6.64	46	6,630	48,800	7.36
Miscellaneous stone	460	97,600	806,000	8.26	435	94,100	781,000	8.30
Total or average	XX	1,770,000	14,200,000	8.04	XX	1,600,000	13,900,000	8.66

<sup>&</sup>lt;sup>r</sup>Revised. XX Not applicable.

 ${\it TABLE~3}$  CRUSHED STONE SOLD OR USED IN THE UNITED STATES, BY GEOGRAPHIC DIVISION  $^{1,\,2}$ 

	200	06 <sup>r</sup>	2007	7
Region/division	Quantity	Value	Quantity	Value
Northeast:				
New England	44,500	410,000	38,500	387,000
Middle Atlantic	189,000	1,410,000	176,000	1,530,000
Total	234,000	1,820,000	214,000	1,920,000
Midwest:				
East North Central	281,000	1,750,000	253,000	1,700,000
West North Central	176,000	1,270,000	160,000	1,310,000
Total	457,000	3,020,000	413,000	3,010,000
South:				
South Atlantic	459,000	4,640,000	384,000	4,260,000
East South Central	186,000	1,410,000	173,000	1,440,000
West South Central	228,000	1,450,000	231,000	1,600,000
Total	873,000	7,490,000	787,000	7,290,000
West:				
Mountain	77,600	543,000	76,200	561,000
Pacific	127,000	1,330,000	111,000	1,090,000
Total	205,000	1,870,000	187,000	1,650,000
Grand total	1,770,000	14,200,000	1,600,000	13,900,000

<sup>&</sup>lt;sup>r</sup>Revised

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits, except unit values and number of quarries; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Does not include American Samoa, Guam, Puerto Rico, and the U.S. Virgin Islands.

<sup>&</sup>lt;sup>3</sup>Includes limestone-dolomite reported with no distinction between the two kinds of stone.

<sup>&</sup>lt;sup>4</sup>Includes sandstone-quartzite reported with no distinction between the two kinds of stone.

<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>Does not include American Samoa, Puerto Rico, and the U.S. Virgin Islands.

 ${\it TABLE~4}$  CRUSHED STONE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY STATE AND TERRITORIES  $^{\rm I}$ 

		2006 <sup>r</sup>			2007	
	Quantity			Quantity		
	(thousand	Value	Unit	(thousand	Value	Unit
State	metric tons)	(thousands)	value	metric tons)	(thousands)	value
Alabama	57,500	\$387,000	\$6.72	52,500	\$402,000	\$7.66
Alaska	2,180	22,400	10.31	1,620	18,000	11.18
Arizona	14,700	121,000	8.25	15,700	145,000	9.23
Arkansas	_ 36,800	250,000	6.81	32,300	232,000	7.19
California	70,100	777,000	11.07	54,300	568,000	10.46
Colorado	12,100 <sup>2</sup>	87,400	7.23	11,200	77,900	6.93
Connecticut	_ 10,800	99,000	9.19	9,440	92,400	9.79
Delaware <sup>3</sup>	W	W	W	W	W	W
Florida	134,000	1,400,000	10.42	95,700	1,120,000	11.73
Georgia	89,000	802,000	9.01	79,200	811,000	10.24
Hawaii	8,980	138,000	15.42	8,610	135,000	15.73
Idaho	5,270	31,700	6.02	5,860	35,600	6.08
Illinois	78,300	596,000	7.61	74,500	591,000	7.94
Indiana	59,300	352,000	5.94	57,600	387,000	6.71
Iowa	36,400	290,000	7.95	33,700	280,000	8.32
Kansas	23,300	181,000	7.78	21,400	188,000	8.82
Kentucky	60,100	443,000	7.38	55,500	427,000	7.70
Louisiana <sup>3</sup>	W	W	W	W	W	W
Maine	5,340	41,500	7.77	4,710	38,300	8.14
Maryland	33,100	326,000	9.85	31,500	287,000	9.12
Massachusetts	13,600	143,000	10.56	11,200	127,000	11.27
Michigan	34,200	150,000	4.38	27,600	129,000	4.67
Minnesota	11,900	116,000	9.79	10,200	109,000	10.74
Mississippi <sup>3</sup>	3,070	53,700	17.45	3,120	58,900	18.89
Missouri	90,400	576,000	6.37	81,300	612,000	7.52
Montana	4,040	21,800	5.39 <sup>2</sup>	1,780	9,610	5.41
Nebraska	7,480	67,100	8.98	7,720	76,200	9.88
Nevada	10,200 <sup>2</sup>	88,000	8.61 <sup>2</sup>	11,200	97,200	8.68
New Hampshire	6,440	55,400	8.61	5,210	68,600	13.18
New Jersey	24,100	169,000	7.00	20,000	162,000	8.08
New Mexico	4,830	32,900	6.80	5,240	39,100	7.46
New York	52,400	438,000	8.36	46,800	427,000	9.13
North Carolina	78,800	868,000	11.02	70,300	898,000	12.78
North Dakota	- 147 <sup>2</sup>	683 <sup>2</sup>	4.65 2	274	1,270	4.64
Ohio Ohio	69,100	431,000	6.23 <sup>2</sup>	67,300	443,000	6.58
Oklahoma	43,800	258,000	5.88 <sup>2</sup>	45,800	294,000	6.43
Oregon	28,900	216,000	7.49	29,000	200,000	6.87
Pennsylvania	113,000	805,000	7.14	109,000	944,000	8.66
Rhode Island	2,570	21,300	8.29	2,240	21,200	9.47
South Carolina	31,200	268,000	8.59	28,100	274,000	9.47
South Dakota	6,320 <sup>2</sup>	41,400	6.55	5,360	44,500	8.30
	-					
Tennessee	65,500	523,000	7.98	62,000	547,000	8.83
Texas	139,000	853,000	6.13	145,000	972,000	6.72
Utah	14,000	89,100	6.39	13,300	98,200	7.41
Vermont	5,840	49,900	8.54	5,660	40,100	7.09
Virginia	77,400	845,000	10.91	62,200	693,000	11.14
Washington	16,800	174,000	10.39	17,700	167,000	9.43
West Virginia	14,500 <sup>2</sup>	120,000 2	8.25 <sup>2</sup>	15,900	157,000	9.88
Wisconsin	40,000	225,000	5.63	25,600	151,000	5.88
Wyoming	12,500	71,100	5.66 <sup>2</sup>	12,000	58,700	4.89
Other	8,960	97,400	10.86	8,740	113,000	12.96
U.S. total or average	1,770,000	14,200,000	8.04	1,600,000	13,900,000	8.66

TABLE 4—Continued CRUSHED STONE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY STATE AND TERRITORIES<sup>1</sup>

		2006			2007	
	Quantity			Quantity		
	(thousand	Value	Unit	(thousand	Value	Unit
Territory	metric tons)	(thousands)	value	metric tons)	(thousands)	value
American Samoa <sup>4</sup>	(5)	(5)	(5)	(5)	(5)	(5)
Guam	900	9,330	10.37	329	3,760	11.41
Puerto Rico	14,800	102,000	6.91	13,500	94,200	7.00
Virgin Islands	(5)	(5)	(5)	(5)	(5)	(5)
Grand total or average	1,780,000	14,300,000	8.03	1,620,000	14,000,000	8.65

<sup>&</sup>lt;sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data; included with "Other."

TABLE 5A CRUSHED STONE SOLD OR USED IN THE UNITED STATES IN 2007, BY SIZE OF OPERATION  $^{\rm I}$ 

		U.S	S. total	
			Quantity	
Size range	Number of	Percentage	(thousand	Percentage
(metric tons)	operations	of total	metric tons)	of total
Less than 25,000	411	11.5	3,330	0.2
25,000 to 49,999	230	6.5	8,050	0.5
50,000 to 99,999	422	11.8	27,700	1.7
100,000 to 199,999	515	14.5	70,900	4.4
200,000 to 299,999	360	10.1	80,900	5.0
300,000 to 399,999	283	7.9	90,400	5.6
400,000 to 499,999	261	7.3	105,000	6.6
500,000 to 599,999	172	4.8	85,800	5.4
600,000 to 699,999	135	3.8	79,400	5.0
700,000 to 799,999	105	2.9	71,100	4.4
800,000 to 899,999	106	3.0	82,000	5.1
900,000 to 999,999	90	2.5	77,600	4.8
1,000,000 to 1,499,999	218	6.1	236,000	14.7
1,500,000 to 1,999,999	130	3.6	198,000	12.4
2,000,000 to 2,499,999	41	1.2	82,600	5.2
2,500,000 to 4,999,999	67	1.9	198,000	12.3
5,000,000 and more	16	0.4	105,000	6.6
Total	3,562	100.0	1,600,000	100.0

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

<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>Data not revised.

<sup>&</sup>lt;sup>3</sup>A significant amount of sold or used material was shipped in from other States.

<sup>&</sup>lt;sup>4</sup>Includes Tutuila Island and dependencies.

<sup>&</sup>lt;sup>5</sup>Withheld to avoid disclosing company proprietary data; included in "Grand total or average."

 ${\it TABLE~5B}$  CRUSHED STONE SOLD OR USED IN THE UNITED STATES IN 2007, BY REGION AND SIZE OF OPERATION  $^{\rm I}$ 

		Nort	heast			Mi	idwest	
			Quantity				Quantity	
Size range	Number of	Percentage	(thousand	Percentage	Number of	Percentage	(thousand	Percentage
(metric tons)	operations	of total	metric tons)	of total	operations	of total	metric tons)	of total
Less than 25,000	32	6.5	198	(2)	108	10.6	1,160	0.3
25,000 to 49,999	38	7.7	1,340	0.6	70	6.8	2,460	0.6
50,000 to 99,999	53	10.8	3,270	1.5	131	12.8	8,630	2.1
100,000 to 199,999	63	12.8	8,290	3.9	155	15.2	23,100	5.6
200,000 to 299,999	55	11.2	12,300	5.8	128	12.5	28,700	6.9
300,000 to 399,999	47	9.6	15,000	7.0	85	8.3	27,000	6.5
400,000 to 499,999	35	7.1	14,000	6.6	93	9.1	37,000	9.0
500,000 to 599,999	37	7.5	18,200	8.5	42	4.1	21,100	5.1
600,000 to 699,999	21	4.3	12,200	5.7	34	3.3	19,900	4.8
700,000 to 799,999	16	3.3	10,900	5.1	30	2.9	20,300	4.9
800,000 to 899,999	14	2.8	10,700	5.0	21	2.1	16,300	4.0
900,000 to 999,999	22	4.5	19,100	8.9	19	1.9	16,500	4.0
1,000,000 to 1,499,999	28	5.7	30,700	14.3	51	5.0	56,000	13.6
1,500,000 to 1,999,999	17	3.5	25,500	11.9	29	2.8	45,300	11.0
2,000,000 to 2,499,999	9	1.8	18,100	8.5	8	0.8	16,200	3.9
2,500,000 to 4,999,999	5	1.0	14,400	6.7	15	1.5	45,500	11.0
5,000,000 and more					4	0.4	27,600	6.7
Total	492	100.0	214,000	100.0	1,023	100.0	413,000	100.0

		South				West			
			Quantity				Quantity		
	Number of	Percentage	(thousand	Percentage	Number of	Percentage	(thousand	Percentage	
	operations	of total	metric tons)	of total	operations	of total	metric tons)	of total	
Less than 25,000	70	5.6	577	(2)	201	25.3	1,390	0.7	
25,000 to 49,999	50	4.0	1,740	2.4	72	9.1	2,510	1.3	
50,000 to 99,999	94	7.5	6,270	0.8	144	18.2	9,500	5.1	
100,000 to 199,999	148	11.8	20,200	2.6	149	18.8	19,300	10.3	
200,000 to 299,999	121	9.6	27,500	3.5	56	7.1	12,400	6.6	
300,000 to 399,999	113	9.0	36,200	4.6	38	4.8	12,100	6.5	
400,000 to 499,999	104	8.3	42,300	5.4	29	3.7	11,700	6.2	
500,000 to 599,999	73	5.8	36,600	4.6	20	2.5	9,880	5.3	
600,000 to 699,999	67	5.3	39,700	5.0	13	1.6	7,590	4.1	
700,000 to 799,999	51	4.1	34,600	4.4	8	1.0	5,420	2.9	
800,000 to 899,999	61	4.9	47,300	6.0	10	1.3	7,670	4.1	
900,000 to 999,999	42	3.3	36,000	4.6	7	0.9	6,030	3.2	
1,000,000 to 1,499,999	121	9.6	130,000	16.5	18	2.3	19,300	10.3	
1,500,000 to 1,999,999	72	5.7	109,000	13.8	12	1.5	18,700	9.9	
2,000,000 to 2,499,999	21	1.7	42,000	5.3	3	0.4	6,230	3.3	
2,500,000 to 4,999,999	35	2.8	105,000	13.4	12	1.5	32,600	17.4	
5,000,000 and more	11	0.9	72,400	9.2	1	0.1	5,180	2.8	
Total	1,254	100.0	787,000	100.0	793	100.0	187,000	100.0	

<sup>--</sup> Zero.

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

<sup>&</sup>lt;sup>2</sup>Less than ½ unit.

TABLE 6 LIMESTONE, DOLOMITE, CALCAREOUS MARL, AND MARBLE SOLD OR USED BY PRODUCERS IN THE UNITED STATES IN 2007, BY STATE  $^{\rm l}$ 

	Limes	stone	Dolon	nite	Calcareou	ıs marl	Marb	le
State	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Alabama	44,400	340,000	1,840	14,000			2,460	18,800
Alaska	6	43						
Arizona	6,520 <sup>2</sup>	69,700 <sup>2</sup>					358	3,300
Arkansas	12,800	89,600	591	4,750				
California	25,800 <sup>2</sup>	240,000 <sup>2</sup>	102	1,200				
Colorado	1,200	9,420					96	676
Connecticut	1,240 <sup>2</sup>	12,500 <sup>2</sup>					318	2,590
Delaware								
Florida	92,100 <sup>2</sup>	1,090,000 2	234	1,540				
Georgia	10,700	116,000					1,320	22,900
Hawaii	14	225					·	
Idaho	1,020	8,200						
Illinois	51,800 <sup>2</sup>	409,000 2	21,600	174,000				
Indiana	50,900 <sup>2</sup>	333,000 <sup>2</sup>	6,720	53,700				
Iowa	33,700	280,000	·					
Kansas	20,700	183,000						
Kentucky	55,500 <sup>2</sup>	427,000 <sup>2</sup>						
Louisiana								
Maine	1,780	12,100						
Maryland	20,100 <sup>2</sup>	161,000 <sup>2</sup>						
Massachusetts	947 <sup>2</sup>	19,600 <sup>2</sup>						
Michigan	19,800	84,600	7,120	40,800				
Minnesota	3,780 <sup>2</sup>	41,000 2	2,770	32,600				
Mississippi <sup>3</sup>	3,010	56,800						
Missouri	76,000 <sup>2</sup>	516,000 <sup>2</sup>	2,760	20,200				
Montana	453	2,450		,				
Nebraska	7,670	75,700						
Nevada	3,880	36,100						
New Hampshire								
New Jersey	<del></del>							
New Mexico	2,880	21,100						
New York	27,500 <sup>2</sup>	243,000 <sup>2</sup>	9,320	86,000			61	557
North Carolina	7,570	93,300	411	5,260				
North Dakota								
Ohio	63,200 <sup>2</sup>	425,000 <sup>2</sup>	3,540	14,000				
Oklahoma	39,600 <sup>2</sup>	253,000 <sup>2</sup>						
Oregon								
Pennsylvania	60,500 <sup>2</sup>	556,000 <sup>2</sup>	11,800	93,100			171	1,460
Rhode Island								
South Carolina	3,360	28,400			2,820	18,800		
South Dakota	3,200	22,500			-,			
Tennessee	60,600 <sup>2</sup>	533,000 <sup>2</sup>						
Texas	137,000 <sup>2</sup>	919,000 <sup>2</sup>					275	3,150
Utah	6,350	46,300						
Vermont	1,510 <sup>2</sup>	11,000 <sup>2</sup>	15	110			2,130	15,100
Virginia	18,400 <sup>2</sup>	202,000 <sup>2</sup>	2,910	16,800			2,130	
Washington	1,840 <sup>2</sup>	21,100 <sup>2</sup>	159	675			318	2,090
West Virginia	15,100	152,000						2,070
Wisconsin	20,300 <sup>2</sup>	117,000 <sup>2</sup>	547	2,680			81	471
Wyoming	2,960	18,400		2,000				
Total	1,020,000	8,280,000	72,500	562,000	2,820	18,800	7,580	71,100
101111	1,020,000	0,200,000	14,500	302,000	2,020	10,000	7,500	/1,100

# LIMESTONE, DOLOMITE, CALCAREOUS MARL, AND MARBLE SOLD OR USED BY PRODUCERS IN THE UNITED STATES IN 2007, BY STATE $^1$

TABLE 7 GRANITE, TRAPROCK, SANDSTONE AND QUARTZITE, AND SLATE SOLD OR USED BY PRODUCERS IN THE UNITED STATES IN 2007, BY STATE $^1$ 

(Thousand metric tons and thousand dollars)

	Granite		Trapro	Traprock		Sandstone and quartzite <sup>2</sup>		Slate	
State	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	
Alabama	1,070	7,960			1,350	11,300	606	4,640	
Alaska	244	2,670	129	1,440					
Arizona	5,030	48,500	271	2,470	535	4,940			
Arkansas	5,340	39,600			11,100	81,900			
California	13,600	152,000	8,250	94,900	1,700	19,600	394	4,610	
Colorado	6,200	39,300	5	22	2,630	19,400			
Connecticut	412	4,150	7,220	70,700					
Delaware									
Florida					256	3,010			
Georgia	66,400	664,000			771	8,450			
Hawaii			6,710	106,000					
Idaho	401	2,120	830	4,090	482	2,950			
Illinois					1,030	8,230			
Indiana									
Iowa									
Kansas									
Kentucky									
Louisiana									
Maine	1,810	17,100							
Maryland	6,340	62,500	3,910	45,300					
Massachusetts	4,850	48,500	5,070	54,400					
Michigan									
Minnesota	3,050	30,800							
Mississippi									
Missouri	1,080	65,600	1,310	8,360	74	283			
Montana	_ 100	1,210			80	410			
Nebraska									
Nevada	2,690	21,900			55	463			
New Hampshire	1,910	27,000	3,260	41,100					
New Jersey	6,380	52,400	13,600	109,000					
New Mexico									
New York	1,590	17,500			4,040	40,500	86	760	
North Carolina	53,700	689,000	6,200	81,100			928	11,000	

<sup>--</sup> Zero.

<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 limestone-dolomite reported with no distinction between the two kinds of stone.

<sup>&</sup>lt;sup>3</sup>A significant amount of sold or used material was shipped in from other States.

# TABLE 7—Continued GRANITE, TRAPROCK, SANDSTONE AND QUARTZITE, AND SLATE SOLD OR USED BY PRODUCERS IN THE UNITED STATES IN 2007, BY STATE $^{\rm I}$

	Gran	nite	Trapr	Traprock		Sandstone and quartzite <sup>2</sup>		Slate	
State	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	
North Dakota									
Ohio					548	3,600			
Oklahoma	3,100	20,200			899	7,410			
Oregon			17,300	118,000					
Pennsylvania	4,500	38,100	7,210	56,900	15,100	121,000	1,580	13,400	
Rhode Island	1,160	11,000							
South Carolina	21,300	220,000							
South Dakota	190	1,930			1,970	20,000	1	13	
Tennessee	378	3,340			972	10,400			
Texas	139	1,520			790	6,420			
Utah			21	128	210	2,250			
Vermont			108	768	1,030	7,270			
Virginia	25,200	305,000	12,800	147,000	1,210	13,000	228	2,550	
Washington	1,840	19,900	7,530	68,700					
West Virginia					858	5,260			
Wisconsin	1,020	6,630	3,160	20,800					
Wyoming									
Total	241,000	2,620,000	105,000	1,030,000	47,700	398,000	3,820	37,000	

<sup>--</sup> Zero.

<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 sandstone-quartzite reported with no distinction between the two kinds of stone.

# TABLE 8 SHELL, VOLCANIC CINDER AND SCORIA, AND MISCELLANEOUS STONE SOLD OR USED BY PRODUCERS IN THE UNITED STATES IN 2007, BY STATE $^1$

	She	ell	Volcanic cind	ler and scoria	Miscellaneous stone		
State	Quantity	Value	Quantity	Value	Quantity	Value	
Alabama					711	5,480	
Alaska					1,240	13,900	
Arizona			81	684	2,880	14,900	
Arkansas					2,430	16,400	
California			499	6,130	3,990	49,200	
Colorado					1,110	9,010	
Connecticut	<del></del>				250	2,450	
Delaware <sup>2</sup>					W	W	
Florida	2,850	24,200			296	3,670	
Georgia							
Hawaii			512	8,050	1,370	21,500	
Idaho				·	3,120	18,300	
Illinois							
Indiana	<del></del>						
Iowa							
Kansas					604	5,460	
Kentucky						3,400	
Louisiana <sup>2</sup>					W	W	
Maine					1,110	9,180	
Maryland					1,090	18,000	
Massachusetts					386	4,340	
	<del></del>				679		
Michigan	<del></del>					3,730	
Minnesota					588	5,010	
Mississippi <sup>2</sup>					113	2,130	
Missouri					136	920	
Montana			475	2,540	668	3,000	
Nebraska					48	481	
Nevada					4,570	38,800	
New Hampshire					45	590	
New Jersey					1	9	
New Mexico			164	1,940	2,210	16,100	
New York					4,230	39,000	
North Carolina					1,440	18,200	
North Dakota			274	1,270			
Ohio							
Oklahoma					2,170	13,300	
Oregon			445	3,350	11,300	78,700	
Pennsylvania					8,060	64,000	
Rhode Island					1,080	10,200	
South Carolina					622	6,840	
South Dakota							
Tennessee	<del></del>						
Texas					6,400	41,000	
Utah			24	467	6,650	49,100	
Vermont					866	5,920	
Virginia					1,480	6,140	
Washington			62	581	5,940	53,700	
West Virginia							
Wisconsin		==			548	2,650	
Wyoming	<del></del>		4,100	23,800	4,960	16,500	
Other			4,100	23,800	8,740	113,000	
Total	2,850	24,200	6,630	48,800	94,100	781,000	
W Withhold to avoid disales		24,200		7oro	94,100	/81,000	

W Withheld to avoid disclosing company proprietary data; included with "Other." -- Zero.

<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>A significant amount of sold or used material was shipped in from other States.

# TABLE 9 CRUSHED STONE SOLD OR USED BY PRODUCERS IN THE UNITED STATES IN 2007, BY USE $^{\rm I}$

	Quantity		
	(thousand	Value	Unit
Use	metric tons)	(thousands)	value
Construction:			
Coarse aggregate (+1½ inch):			
Macadam	3,910	\$27,900	\$7.12
Riprap and jetty stone	9,810	104,000	10.61
Filter stone	4,380	40,900	9.33
Other coarse aggregate	27,900	263,000	9.42
Coarse aggregate, graded:			
Concrete aggregate, coarse	49,200	439,000	8.92
Bituminous aggregate, coarse	28,400	234,000	8.24
Bituminous surface-treatment aggregate	8,110	72,700	8.96
Railroad ballast	8,200	63,400	7.73
Other graded coarse aggregate	136,000	1,450,000	10.67
Fine aggregate (- 3/8 inch):			
Stone sand, concrete	8,830	98,300	11.13
Stone sand, bituminous mix or seal	10,400	76,900	7.42
Screening, undesignated	13,700	100,000	7.34
Other fine aggregate	54,100	530,000	9.79
Coarse and fine aggregates:	- ,	,	
Graded road base or subbase	99,100	640,000	6.47
Unpaved road surfacing	12,000	88,200	7.37
Terrazzo and exposed aggregate	847	11,600	13.65
Crusher run or fill or waste	26,200	160,000	6.10
Roofing granules	4,650	93,500	20.09
Other coarse and fine aggregates	135,000	1,150,000	8.51
Other construction materials	4,920	43,400	8.81
Agricultural:	7,720	75,700	0.0
Agricultural limestone	10,800	77,200	7.16
Poultry grit and mineral food	871	9,140	10.49
			27.55
Other agricultural uses	1,130	31,100	27.33
Chemical and metallurgical:	90.600	522,000	5.05
Cement manufacture	89,600	533,000	5.95
Lime manufacture	15,600	143,000	9.17
Dead-burned dolomite manufacture	W	W	W 5.00
Flux stone	2,920	17,400	5.95
Chemical stone	W	W	W
Glass manufacture	392	3,540	9.04
Sulfur oxide removal	3,740	21,000	5.63
Special:			
Mine dusting or acid water treatment	305	6,350	20.82
Asphalt fillers or extenders	1,100	14,400	13.15
Whiting or whiting substitute	220	5,410	24.59
Other fillers or extenders	3,890	87,100	22.37
Other miscellaneous uses and specified uses not listed	7,740	79,500	10.28
Unspecified: <sup>2</sup>			
Reported	493,000	4,420,000	8.96
Estimated	324,000	2,720,000	8.41
Total or average	1,600,000	13,900,000	8.66

W Withheld to avoid disclosing company proprietary data; included in "Total or average."

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

<sup>&</sup>lt;sup>2</sup>Reported and estimated production without a breakdown by end use.

 ${\it TABLE~10}$  LIMESTONE AND DOLOMITE SOLD OR USED BY PRODUCERS IN THE UNITED STATES IN 2007, BY USE  $^{\rm l}$ 

	Limesto	one <sup>2</sup>	Dolom	iite
Use	Quantity	Value	Quantity	Value
Construction:				
Coarse aggregate (+1½ inch):				
Macadam	3,470	23,600	73	1,100
Riprap and jetty stone	6,370	58,700	406	4,650
Filter stone	3,260	29,100	202	1,600
Other coarse aggregate	16,300	136,000	2,140	14,700
Coarse aggregate, graded:				
Concrete aggregate, coarse	37,600	317,000	2,400	20,000
Bituminous aggregate, coarse	16,900	135,000	3,240	26,900
Bituminous surface-treatment aggregate	5,930	52,000	870	7,690
Railroad ballast	1,910	14,100	294	2,480
Other graded coarse aggregate	85,200	832,000	8,380	70,300
Fine aggregate (- 3/8 inch):				
Stone sand, concrete	3,320	35,000	444	2,640
Stone sand, bituminous mix or seal	6,530	47,100	917	6,710
Screening, undesignated	9,080	63,000	423	1,830
Other fine aggregate	29,400	282,000	2,600	21,800
Coarse and fine aggregates:				
Graded road base or subbase	73,900	450,000	4,360	28,600
Unpaved road surfacing	9,400	70,200	378	2,360
Terrazzo and exposed aggregate	426	3,640	W	W
Crusher run or fill or waste	17,300	103,000	1,870	10,700
Roofing granules	385	3,360		,
Other coarse and fine aggregates	70,100	576,000	5,710	38,500
Other construction materials	1,790	13,600	451	1,860
Agricultural:	1,750	13,000	431	1,000
Agricultural limestone	9,200	67,900	1,580	9,270
Poultry grit and mineral food	837	8,610	1,500	J,270
Other agricultural uses	873	26,400	W	W
Chemical and metallurgical:	075	20,400	**	**
Cement manufacture	84,400	503,000		
Lime manufacture	14,500	139,000	W	W
Dead-burned dolomite manufacture	W	W	W	W
Flux stone	1,800	11,100	992	5,180
Chemical stone	1,800 W	11,100 W	992	3,100
Glass manufacture	w 392			
	3.740	3,540		
Sulfur oxide removal	3,740	21,000		
Special:	205	( 250		
Mine dusting or acid water treatment	305	6,350		
Asphalt fillers or extenders	622	9,020		
Whiting or whiting substitute	166	5,140		
Other fillers or extenders	3,230	74,400	58	747
Other miscellaneous uses and specified uses not listed	6,790	66,000	352	3,610
Unspecified: <sup>3</sup>				
Reported	274,000	2,330,000	29,400	240,000
Estimated	218,000	1,750,000	3,740	30,900
Total or average	1,020,000	8,280,000	72,500	562,000

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

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

 $<sup>^2</sup>$ Includes a minor amount of limestone-dolomite reported without a distinction between the two.

<sup>&</sup>lt;sup>3</sup>Reported and estimated production without a breakdown by end use.

 ${\it TABLE~11}$  LIMESTONE AND DOLOMITE SOLD OR USED BY PRODUCERS IN 2007, BY STATE AND USE  $^{\rm l}$ 

	Concrete a		Bituminou	s aggregate_	Roadstone ar		Riprap and ra			
State	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Alabama	2,330	17,300	9,460	75,600	1,920	16,200	145	1,320	8,170	63,200
Alaska					6	43				
Arizona										
Arkansas	316	2,240	716	6,130	1,800	11,500	47	332	2,510	15,500
California	65	2,000	339	4,500	W	W	W	W	542	8,050
Colorado	W	W			W	W	40	450		
Connecticut	W	W	W	W	W	W	W	W	W	W
Delaware										
Florida	13,500	179,000	9,730	181,000	9,740	68,700	104	2,670	10,900	134,000
Georgia	W	W	W	W	W	W			W	W
Hawaii										
Idaho					102	476				
Illinois		52,100	17,400	144,000	6,730	49,600	525	4,540	4,340	26,900
Indiana	4,410	28,700	8,280	49,700	6,210	37,500	699	5,930	6,190	35,400
Iowa	1,460	14,800	920	8,820	6,690	55,700	263	3,130	1,690	12,500
Kansas	W	W	W	W	793	3,680	38	592	1,030	9,310
Kentucky	3,180	25,000	5,300	44,300	6,350	40,300	361	2,760	6,980	53,500
Louisiana										
Maine		88	111	583	11	52			307	2,630
Maryland	6,360	43,300	1,910	16,300	1,160	8,740	184	1,320	3,560	32,700
Massachusetts	_ ´	·		·	W	W	W	W	257	4,590
Michigan	3,330	19,900	1,580	9,550	2,890	15,600	216	2,010	413	2,130
Minnesota	364	4,780	794	12,900	732	8,460	83	1,870	903	8,520
Mississippi <sup>2</sup>	W	W	W	W	W	W			W	W
Missouri	2,720	18,800	5,680	48,300	6,080	31,800	2,160	15,900	5,810	32,600
Montana							-,			
Nebraska	W	W	W	W	W	W	W	W	W	W
Nevada	_ ··									
New Hampshire										
New Jersey										
New Mexico		W	382	1,230	205	1,900	98	653	153	1,470
New York	2,140	20,600	4,760	42,700	3,800	30,200	238	3,320	5,220	37,700
North Carolina		20,000 W				50,200		5,520	3,220	37,700
North Dakota	_ ''									
Ohio	2,900	17,500	11,200	68,000	9,200	64,200	571	4,550	5,120	30,800
Oklahoma	4,410	33,400	1,030	7,400	3,210	23,800	116	1,150	3,120	18,800
Oregon	4,410	33,400	1,030	7,400	5,210	23,800		1,130	3,120	10,000
Pennsylvania	4,760	40,400	12,500	103,000	8,310	61,400	667	6,770	7,010	45,800
Rhode Island										45,600
South Carolina					W	W			 W	W
South Dakota			17.400	167,000	2 000		070	7.460	16,000	126,000
Tennessee	_ 4,450	42,100	17,400	167,000	3,000	23,000 117,000	979	7,460	16,000	126,000
Texas	_ 8,010	65,600	12,900	135,000	22,400	· · · · · ·	706	6,460	11,700	78,600
Utah	_ W	W	W	W	297	1,840	24	301	485	2,620
Vermont	_ W	W	W	W	W	W	W	W	W	W
Virginia	_ 1,800	15,600	2,350	17,600	2,610	19,000	223	1,610	2,570	17,400
Washington	_ W	W		2.460	174	683			W	W
West Virginia	_ 360	2,880	561	3,460	777	4,460	98	670	1,370	10,800
Wisconsin	_ 506	3,900	960	7,670	3,180	15,500	155	470	2,760	12,400
Wyoming	W	W	W	W	W	W	W	W	W	W
Total	75,700	678,000	129,000	1,190,000	110,000	727,000	8,960	79,900	109,000	851,000
Total withheld		28,000	2,380	32,800	1,610	15,600	215	3,670	2,360	27,200
Grand total	78,100	706,000	131,000	1,220,000	112,000	742,000	9,170	83,500	111,000	879,000

# $\label{total continued} TABLE~11\\ --Continued$ LIMESTONE AND DOLOMITE SOLD OR USED BY PRODUCERS IN 2007, BY STATE AND USE $^1$

(Thousand metric tons and thousand dollars)

	Cement ma	nufacture	Agricultu	ıral uses	Lime man	ufacture	Other	uses	Tot	al
State	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Alabama	1,290	9,290	W	W	W	W	19,000	145,000	46,300	354,000
Alaska									6	43
Arizona	W	W			W	W	4,240	39,100	6,520 <sup>3</sup>	69,700 <sup>3</sup>
Arkansas			194	1,280			7,840	57,300	13,400	94,300
California	10,500	30,300	170	2,960	W	W	13,800	188,000	25,900 <sup>3</sup>	241,000 <sup>3</sup>
Colorado							1,110	8,580	1,200	9,420
Connecticut			W	W			1,140	11,200	1,240 <sup>3</sup>	12,500 <sup>3</sup>
Delaware										
Florida	5,790	33,000	554	5,190			42,000	488,000	92,300 <sup>3</sup>	1,090,000 3
Georgia	W	W	W	W			5,940	68,000	10,700	116,000
Hawaii							14	225	14	225
Idaho	W	W	W	W	W	W	W	W	1,020	8,200
Illinois	3,010	31,800	2,540	10,400			32,900	263,000	73,400 <sup>3</sup>	583,000 <sup>3</sup>
Indiana	4,450	23,300	1,460	6,880	W	W	25,900	199,000	57,600 <sup>3</sup>	387,000 <sup>3</sup>
Iowa		W	1,030	8,990	W	W	19,300	160,000	33,700	280,000
Kansas		W	W	W			16,500	145,000	20,700	183,000
Kentucky		W	511	2,460	W	W	28,300	224,000	55,500 <sup>3</sup>	427,000 <sup>3</sup>
Louisiana	_			2,100						
Maine		W					W	W	1,780	12,100
Maryland		W	W	W	W	W	5,620	52,100	20,100 <sup>3</sup>	161,000 <sup>3</sup>
Massachusetts	_ <u>''</u>		W	W	W	W	225	8,660	947 <sup>3</sup>	19,600 <sup>3</sup>
Michigan	5,710	6,300	120	1,100	W	W	11,400	61,900	27,000	125,000
Minnesota		0,300	123	1,150			3,550	36,000	6,550 <sup>3</sup>	73,700 <sup>3</sup>
Mississippi <sup>2</sup>	W	W	W	1,130 W			1,030	18,800	3,010	56,800
	- w 6,620	25,300	903	4,050	W	 W		350,000	78,700 <sup>3</sup>	537,000 <sup>3</sup>
Missouri							47,100			
Montana							453	2,450	453	2,450
Nebraska	W	W	W	W			4,320	42,300	7,670	75,700
Nevada	W	W	W	W	W	W	W	W	3,880	36,100
New Hampshire										
New Jersey										
New Mexico	W	W					1,560	11,600	2,880	21,100
New York	W	W	164	1,430			16,900	155,000	36,800 <sup>3</sup>	329,000 <sup>3</sup>
North Carolina							W	W	7,980	98,500
North Dakota										2
Ohio	3,250	22,100	892	6,310	1,060	4,100	32,600	222,000	66,700 <sup>3</sup>	439,000 <sup>3</sup>
Oklahoma	2,580	7,970	104	529			25,000	160,000	39,600 <sup>3</sup>	253,000 <sup>3</sup>
Oregon										
Pennsylvania	5,690	79,000	W	W	W	W	31,400	275,000	$72,400^{-3}$	649,000 <sup>3</sup>
Rhode Island										
South Carolina							2,410	21,700	3,360	28,400
South Dakota	W	W					W	W	3,200	22,500
Tennessee	W	W	220	2,280	W	W	16,900	143,000	60,600 <sup>3</sup>	533,000 <sup>3</sup>
Texas	11,400	37,200	W	W	W	W	69,100	474,000	137,000 <sup>3</sup>	919,000 <sup>3</sup>
Utah	2,300	16,500	6	204	22	622	2,710	20,300	6,350	46,300
Vermont			W	W			1,050	7,410	1,530 <sup>3</sup>	$11,100^{-3}$
Virginia			W	W	W	W	10,600	120,000	21,300 <sup>3</sup>	219,000 3
Washington			W	W	W	W	1,620	17,300	$2,000^{-3}$	21,800 3

## 

	Cement ma	anufacture	Agricultu	ıral uses	Lime mar	ufacture	Othe	ruses	Tota	al
State	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
West Virginia			12	79			11,900	130,000	15,100	152,000
Wisconsin			221	2,620			13,000	77,700	20,800 3	120,000 3
Wyoming	W	W					1,990	11,700	2,960	18,400
Total	83,100	494,000	10,200	81,400	12,000	120,000	516,000	4,310,000	XX	XX
Total withheld	21,900	181,000	3,400	56,700	14,600	139,000	12,400	138,000	XX	XX
Grand total	105,000	675,000	13,600	138,000	26,500	259,000	528,000	4,450,000	1.090,000	8.840.000

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

<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>A significant amount of sold or used material was shipped in from other States.

<sup>&</sup>lt;sup>3</sup>Includes limestone-dolomite reported with no distinction between the two kinds of stone.

TABLE 12 GRANITE, TRAPROCK, SANDSTONE AND QUARTZITE SOLD OR USED BY PRODUCERS IN THE UNITED STATES IN 2007, BY USE  $^{\rm l}$ 

	Gran	ite	Trapro	ock	Sandstone and quartzite <sup>2</sup>		
Use	Quantity	Value	Quantity	Value	Quantity	Value	
Construction:							
Coarse aggregate (+1½ inch):							
Macadam	W	W	111	1,090	W	W	
Riprap and jetty stone	1,380	19,100	608	7,810	512	6,330	
Filter stone	313	3,820	323	3,620	152	1,290	
Other coarse aggregate	4,390	64,300	3,640	34,400	479	4,480	
Coarse aggregate, graded:							
Concrete aggregate, coarse	4,430	51,600	2,620	29,400	854	7,110	
Bituminous aggregate, coarse	2,990	25,500	2,960	27,700	1,390	12,400	
Bituminous surface-treatment aggregate	609	6,120	275	2,230	244	2,500	
Railroad ballast	3,140	26,500	1,140	8,000	44	428	
Other graded coarse aggregate	31,600	418,000	6,320	78,800	1,830	18,500	
Fine aggregate (- 3/8 inch):							
Stone sand, concrete	2,810	29,600	651	11,400	1,010	13,600	
Stone sand, bituminous mix or seal	1,150	7,830	806	7,900	578	4,840	
Screening, undesignated	1,790	17,100	1,160	9,160	667	4,850	
Other fine aggregate	15,900	164,000	2,780	28,700	1,070	11,600	
Coarse and fine aggregates:							
Graded road base or subbase	5,340	47,300	9,970	77,100	2,470	15,200	
Unpaved road surfacing	304	2,430	1,310	9,340	12	127	
Terrazzo and exposed aggregate	240	4,400	W	W	W	W	
Crusher run or fill or waste	3,760	27,000	1,660	11,600	874	4,650	
Roofing granules	W	W	3,430	26,000		-	
Other coarse and fine aggregates	32,700	309,000	11,900	99,700	5,720	40,700	
Other construction materials	553	5,670	108	1,640	456	3,690	
Agricultural:						-,	
Agricultural limestone						_	
Poultry grit and mineral food						_	
Other agricultural uses	W	W	W	W		_	
Chemical and metallurgical:							
Cement manufacture					230	1,810	
Lime manufacture						-,01	
Dead-burned dolomite manufacture						_	
Flux stone					W	W	
Chemical stone							
Glass manufacture						_	
Sulfur oxide removal						_	
Special:							
Mine dusting or acid water treatment							
Asphalt fillers or extenders	W	W					
Whiting or whiting substitute							
Other fillers or extenders			3	20		_	
Other miscellaneous uses and specified uses not listed	17	131	54	719	90	1,340	
Unspecified: <sup>3</sup>	1 /	131	34	/19	90	1,340	
	102 000	1 000 000	21 900	222 000	10.200	0.4 504	
Reported	103,000	1,090,000	31,800	333,000	10,200	84,500	
Estimated	23,100	236,000	21,200	221,000	18,600	156,000	
Total	241,000	2,620,000	105,000	1,030,000	47,700	398,00	

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

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

 $<sup>^2</sup>$ Includes sandstone-quartzite reported with no distinction between the two kinds of stone.

<sup>&</sup>lt;sup>3</sup>Reported and estimated production without a breakdown by end use.

TABLE 13 MARBLE, VOLCANIC CINDER AND SCORIA, AND MISCELLANEOUS STONE SOLD OR USED BY PRODUCERS IN THE UNITED STATES IN 2007, BY  ${\sf USE}^1$ 

	Marb	le	Volcanic cinde	r and scoria	Miscellaneous stone	
Use	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1½ inch):						
Macadam	W	W			W	W
Riprap and jetty stone					531	7,480
Filter stone			W	W	134	1,470
Other coarse aggregate	W	W	3	37	963	8,890
Coarse aggregate, graded:						
Concrete aggregate, coarse	131	527	W	W	1,180	13,300
Bituminous aggregate, coarse	W	W			916	6,050
Bituminous surface-treatment aggregate					181	2,110
Railroad ballast					1,670	11,900
Other graded coarse aggregate			199	3,870	2,670	31,500
Fine aggregate (- 3/8 inch):						
Stone sand, concrete	125	893			475	5,050
Stone sand, bituminous mix or seal					387	2,530
Screening, undesignated					537	4,210
Other fine aggregate	W	W	74	1,160	1,120	8,980
Coarse and fine aggregates:						
Graded road base or subbase	79	495	22	150	2,150	15,700
Unpaved road surfacing			117	494	444	3,180
Terrazzo and exposed aggregate	25	2,150			139	1,240
Crusher run or fill or waste					740	3,150
Roofing granules	191	1,450			219	967
Other coarse and fine aggregates	W	W	229	2,680	8,520	82,500
Other construction materials			17	126	280	4,500
Agricultural:						
Agricultural limestone					1	5
Poultry grit and mineral food					33	526
Other agricultural uses	W	W	16	422	8	86
Chemical and metallurgical:						
Cement manufacture					2,120	9,340
Lime manufacture					,	
Dead-burned dolomite manufacture						
Flux stone					18	125
Chemical stone						
Glass manufacture						
Sulfur oxide removal						
Special:						
Mine dusting or acid water treatment						
Asphalt fillers or extenders						
Whiting or whiting substitute	54	273				
Other fillers or extenders	586	11,700			W	W
Other miscellaneous uses and specified uses not listed	342	4,870			583	9,590
Unspecified: <sup>2</sup>	3.2	1,070			303	7,570
Reported Reported			4,750	28,500	38,300	300,000
Estimated	5,730	43,600	1,210	11,400	29,800	246,000
Total	7,580	71,100	6,630	48,800	94,100	781,000

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

<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>Reported and estimated production without a breakdown by end use.

 ${\it TABLE~14}$  RECYCLED ASPHALT SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY STATE  $^{\rm l}$ 

		2006			2007	
	Quantity			Quantity		
	(thousand	Value	Unit	(thousand	Value	Unit
State	metric tons)	(thousands)	value	metric tons)	(thousands)	value
Alabama						
Alaska	3	\$55	\$18.33			
Arizona						
California	126	638	5.06	80	\$576	\$7.20
Colorado	4	35	8.75	61	278	4.56
Connecticut	39	217	5.56	55	303	5.51
Florida	366	2,450	6.70	369	2,470	6.68
Hawaii				73	720	9.86
Illinois				736	6,150	8.36
Indiana	70	710	10.14	23	238	10.35
Iowa	14	81	5.79	8	46	5.75
Kansas	(2)	(2)				
Kentucky	<del></del>			22	28	1.27
Louisiana	2	30	15.00	17	87	5.12
Maine	70	680	9.71	106	1,040	9.80
Maryland	45	450	10.00			
Massachusetts	4	19	4.75	257	1,750	6.79
Michigan	1	4	4.00			
Minnesota	8	41	5.13	40	263	6.58
Missouri	236	1,300	5.52	57	315	5.53
Nevada		31	6.20	27	177	6.56
New Hampshire	3	17	5.67	121	1,700	14.05
New Jersey	1	4	4.00	3	11	3.67
New Mexico	4	13	3.25	10	42	4.20
New York	129	712	5.52	165	1,080	6.53
North Carolina	<del></del>			9	95	10.56
Ohio		22	4.40	54	165	3.06
Oklahoma	9	70	7.78			
Oregon	18	130	7.22	27	159	5.89
Pennsylvania	335	2,350	7.02	528	4,640	8.79
Rhode Island				2	19	9.50
South Carolina						
South Dakota	14	76	5.43			
Tennessee				45	359	7.98
Texas		1,380	24.64	204	4,060	19.90
Vermont		102	9.27	8	63	7.88
Virginia	2	10	5.00			
Washington		25	1.32	3	11	3.67
Wisconsin	21	162	7.71	44	244	5.55
Total or average	1,620	11,800	7.30	3,110	26,800	8.63
	7	7		-, -	- /	

<sup>--</sup> Zero.

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

<sup>&</sup>lt;sup>2</sup>Less than ½ unit.

TABLE 15  $\label{eq:table 15} \text{RECYCLED CONCRETE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY STATE}^1$ 

		2006			2007	
	Quantity			Quantity		
	(thousand	Value	Unit	(thousand	Value	Unit
State	metric tons)	(thousands)	value	metric tons)	(thousands)	value
Alabama				45	\$317	\$7.04
Alaska						
Arizona		\$45	\$9.00			
California	173	1,310	7.58	185	1,350	7.27
Colorado		15	5.00	14	112	8.00
Connecticut	9	51	5.67	18	97	5.39
Florida	13	84	6.46	40	132	3.30
Hawaii		44	8.80	22	197	8.95
Illinois	1,600	11,100	6.92	552	4,280	7.76
Indiana						
Iowa	<del></del>					
Kansas				7	88	12.57
Kentucky	440	4,370	9.93			12.57
Louisiana	26	447	17.19	5	76	15.20
Maine				(2)	(2)	13.20
Maryland				(2)	(2)	
Massachusetts	9	147	16.33	128	1,180	9.25
Michigan		6	6.00	128	1,100	7.23
Minnesota	5	27	5.40	590	3,530	5.98
Missouri			J.40 	390	3,330	3.96
Nevada				448	2,770	6.18
New Hampshire					2,770	0.16
New Jersey	61	395	6.48	4	13	3.25
New Mexico		2	2.00			3.23
New York	90	492	5.47	108	 677	6.27
North Carolina	90	492	3.47	108		0.27
Ohio				47		3.98
Oklahoma	13	41	3.15	47	187	3.96
Oregon	20	141	7.05	22	150	6.82
Pennsylvania	3	26	8.67	23 7	157	6.83
Rhode Island			7.70		64	9.14
South Carolina	9	70	7.78			
South Dakota	30	163	5.43			
Tennessee Texas				 45	475	10.56
Vermont				43	4/5	10.36
Virginia	177	1,890	10.66	108	1,240	11.51
Washington	23	30	1.30	9	50	5.56
Wisconsin	206	997	4.84	52	292	5.62
Total or average	2,920	21,900	7.48	2,480	17,400	7.03
7ama	2,720	21,700	,10	2,700	17,700	7.03

<sup>--</sup> Zero

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

<sup>&</sup>lt;sup>2</sup>Less than ½ unit.

 ${\it TABLE~16}$  CRUSHED AND BROKEN STONE OPERATIONS IN THE UNITED STATES IN 2007, BY STATE

					Processi	ng plants		
	Active	Active	Dredging			Stationary	None or	Sales
State	operations	quarries	operations	Stationary	Portable	and portable	unspecified	yards
Alabama	81	73		63	7	2	1	8
Alaska	24	24		4	13	1	5	1
Arizona	_ 56	62		25	29	4		
Arkansas	82	80		41	30	6	4	2
California	151	151	1	86	45	9	6	5
Colorado	38	43		19	14	2	4	
Connecticut	27	27		19	6	2		
Delaware	3							3
Florida	106	89	1	41	35	10	1	19
Georgia	91	84	1	78	2		2	8
Hawaii	30	30		10	18	2	1	
Idaho	- 44	64		10	31	2	2	
Illinois	140	136		79	45	10		7
Indiana	96	91		80	6	3	4	5
Iowa	170	191	1	31	128	1	6	3
Kansas	85	127		23	52	7	2	1
Kentucky	94	92		75	5	10	2	2
Louisiana	21	2		2				19
Maine	20	20		12	7	2		
Maryland	38	30		22	6		1	9
Massachusetts	32	30		20	7	3		2
Michigan	36	33		23	6	3	1	3
Minnesota	39	54		8	26	1	4	
Mississippi	- 16	4		3	1			12
Missouri	204	208		118	68	12	6	1
Montana	_ 204	28		8	10		1	1
Nebraska	- 9	9		7		1		
Nevada	- 24	26		19	1 3	1	1	
	-			13	3			
New Hampshire	- 16 21	16						
New Jersey	-	20		11	2	8		1
New Mexico	- 37	40		14	19	3	1	
New York	_ 111	112	1	85	21	4	2	
North Carolina	_ 114	108		100	8	1		6
North Dakota	_ 2	2			1		1	
Ohio	108	112		77	18	7	2	4
Oklahoma	_ 73	73		60	8	2	2	1
Oregon	177	205		52	119	1	7	2
Pennsylvania	227	230		175	22	16	15	
Rhode Island	_ 7	7		7				
South Carolina	_ 38	30		28		2		8
South Dakota	- 9	9		9				
Tennessee	130	125		110	8	1	4	7
Texas	221	224		120	60	12	4	25
Utah	36	39		16	19	1		
Vermont	26	26		12	10	2	2	
Virginia	110	94		79	7	4		20
Washington	115	138		36	55	6	16	2
West Virginia	33	30		23		4	1	5
Wisconsin	140	226		47	85	3	3	2
Wyoming	35	36		27	8			
Total	3,562	3,710	5	2,027	1,074	171	114	193

-- Zero.

 ${\rm TABLE~17}$  U.S. EXPORTS OF CRUSHED STONE IN 2007, BY DESTINATION  $^{\rm I}$ 

			Limestone				
			for cement	Chalk,	Granules,		
Destination		Limestone	manufacturing	crude	chippings	Other	Total
North America	metric tons	21,900	407,000	3,450	149,000	362,000	943,000
South America	do.	5,360	689	322	746	1,310	8,420
Europe	do.	194	4,330	30	11,100	4,410	20,100
Asia	do.	931	30,600	29	7,600	5,410	44,600
Oceania	do.			60	20	1,740	1,820
Middle East	do.	1,170		1	686	2,130	3,990
Africa	do.		3			2,020	2,030
Total:							
Quantity	do.	29,600	443,000	3,900	169,000	379,000	1,020,000
Value	thousands	\$5,580	\$11,900	\$2	\$24,100	\$20,800	\$62,500

<sup>--</sup> Zero.

Source: U.S. Census Bureau.

 ${\it TABLE~18}$  U.S. IMPORTS OF CRUSHED STONE AND CALCIUM CARBONATE FINES, BY  ${\it TYPE}^1$ 

		2006			2007	
	Quantity			Quantity		
	(thousand)	Value, c.i.f. <sup>2</sup>	Unit	(thousand)	Value, c.i.f. <sup>2</sup>	Unit
Type	metric tons)	(thousands)	value	metric tons)	(thousands)	value
Crushed stone and chips:						
Limestone	9,180	\$72,200	\$7.87	9,510	\$72,700	\$7.64
Limestone for flux or cement manufacturing	3,270	32,000	9.78	2,870	31,100	10.83
Quartzite	21	3,090	147.14			
Other	7,350	98,100	13.34	7,120	107,000	15.04
Total or average	19,800	205,000	XX	19,500	211,000	XX
Calcium carbonate fines: <sup>3</sup>						
Natural chalk	(4)	15	66.67	7	228	32.57
Calcium carbonates, other chalk	1	456	533.96	1	1,170	971.71
Total or average	1	471	XX	8	1,400	XX
Grand total or average	19,800	206,000	XX	19,500	212,000	XX

<sup>--</sup> Zero. 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>1</sup>Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Cost, insurance, and freight value.

<sup>&</sup>lt;sup>3</sup>Excludes precipitated calcium carbonate.

<sup>&</sup>lt;sup>4</sup>Less than ½ unit.