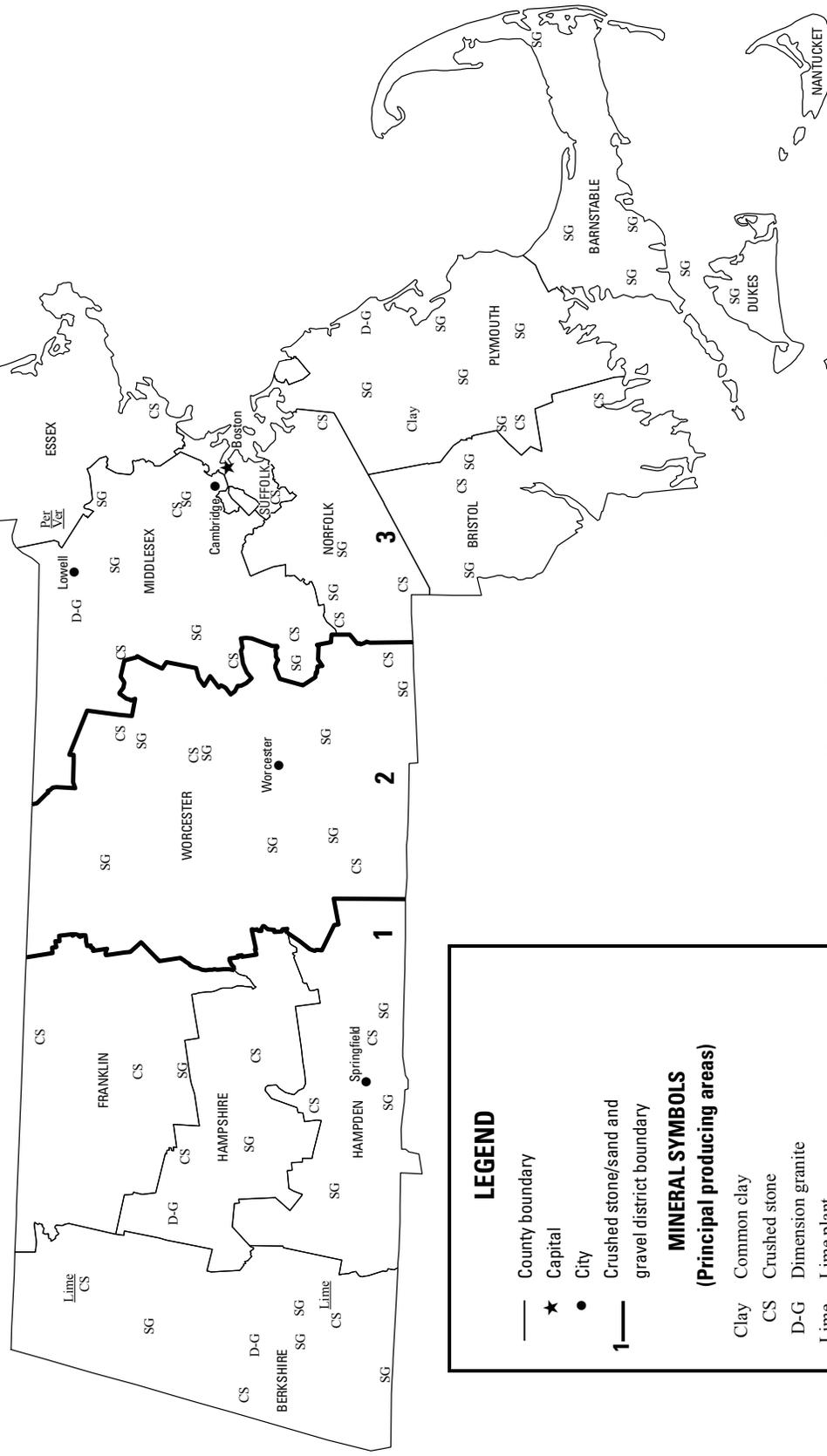




2009 Minerals Yearbook

MASSACHUSETTS [ADVANCE RELEASE]

MASSACHUSETTS

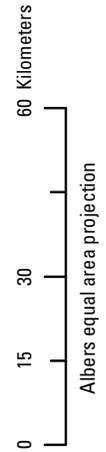


LEGEND

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

MINERAL SYMBOLS (Principal producing areas)

- Clay
- CS Crushed stone
- D-G Dimension granite
- Lime Lime plant
- Per Perlite plant
- SG Construction sand and gravel
- Ver Vermiculite plant



THE MINERAL INDUSTRY OF MASSACHUSETTS

This chapter has been prepared under a Memorandum of Understanding between the U.S. Geological Survey and the Massachusetts Office of the State Geologist for collecting information on all nonfuel minerals.

In 2009, Massachusetts nonfuel raw mineral production¹ was valued at \$214 million, based upon annual U.S. Geological Survey data. This was a \$32 million, or a 13%, decrease from the State's total nonfuel mineral value of \$246 million in 2008, which had decreased by \$47 million, or 16%, from the production value total of \$293 million in 2007. The State decreased in rank to 41st from 40th among the 50 States for total nonfuel mineral production value. The State's leading nonfuel mineral commodities were, in descending order of production value, crushed stone and construction sand and gravel, accounting for 97% of the State's total reported value. Because production and production value data for lime and for common clays have been withheld for certain years, the State's actual total nonfuel mineral values for 2007–09 are higher than those reported in table 1.

¹The terms "nonfuel mineral production" and related "values" encompass variations in meaning, depending upon the mineral products. Production may be measured by mine shipments, mineral commodity sales, or marketable production (including consumption by producers) as is applicable to the individual mineral commodity.

All 2009 USGS mineral production data published in this chapter are those available as of September 2011. All USGS Mineral Industry Surveys and USGS Minerals Yearbook chapters—mineral commodity, State, and country—can be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals>.

In 2009, as in 2008, all of the State's mineral commodities experienced a decline in quantities produced and production value. In descending order, the greatest decreases were seen with construction sand and gravel, crushed stone, and dimension stone, for a combined decrease of 2.5 million metric tons (Mt) from 2008, which followed a combined decrease of 5.7 Mt from 2007–08. Total production values for these commodities were down by more than \$24 million, \$8 million, and \$1 million, or about 22%, 6%, and 14%, respectively, from 2008 (table 1). From 2007 to 2008, production values for these three mineral commodities declined by \$31 million, \$10 million, and \$4.9 million, or almost 22%, 7%, and almost 41%, respectively.

Although production was down 9,000 metric tons (t) from 53,000 in 2008 to 44,000 in 2009, Massachusetts rose in rank to 9th from 10th among the 37 dimension stone-producing States. The State had ranked fourth in the Nation in 2007, producing 98,000 t. Additionally, one company in Essex County produced expanded perlite and exfoliated vermiculite products for horticultural, commercial, and industrial applications from source materials obtained from outside of the State.

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

(Thousand metric tons and thousand dollars)

| Mineral | 2007 | | 2008 | | 2009 | |
|-------------------------------|----------|---------|---------------------|----------------------|----------|---------|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| Clays, common | 31 | W | 24 | W | W | W |
| Gemstones, natural | NA | 1 | NA | 1 | NA | 1 |
| Lime | W | W | W | W | W | W |
| Sand and gravel, construction | 15,800 | 141,000 | 11,300 ^r | 110,000 ^r | 9,460 | 85,600 |
| Stone: | | | | | | |
| Crushed | 12,300 | 140,000 | 11,200 ^r | 130,000 ^r | 10,500 | 122,000 |
| Dimension | 98 | 12,000 | 53 | 7,140 | 44 | 6,130 |
| Total | XX | 293,000 | XX | 246,000 ^r | XX | 214,000 |

^rRevised. NA Not available. W Withheld to avoid disclosing company proprietary data; excluded from "Total." XX Not applicable.

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

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

TABLE 2
 MASSACHUSETTS: CRUSHED STONE SOLD OR USED, BY TYPE¹

| Type | 2008 | | | 2009 | | |
|------------------------|--------------------|---------------------------------|----------------------|--------------------|---------------------------------|-------------------|
| | Number of quarries | Quantity (thousand metric tons) | Value (thousands) | Number of quarries | Quantity (thousand metric tons) | Value (thousands) |
| Limestone ² | 4 | 768 | \$16,900 | 4 | 1,560 | \$28,100 |
| Granite | 11 | 3,300 | 35,200 | 11 | 3,240 | 34,000 |
| Traprock | 19 | 5,570 | 59,400 | 17 | 4,510 | 46,700 |
| Miscellaneous stone | 8 ^r | 1,550 ^r | 18,000 ^r | 10 | 1,230 | 13,300 |
| Total | XX | 11,200 ^r | 130,000 ^r | XX | 10,500 | 122,000 |

^rRevised. XX Not applicable.

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

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

TABLE 3
 MASSACHUSETTS: CRUSHED STONE SOLD OR USED BY PRODUCERS
 IN 2009, BY USE¹

(Thousand metric tons and thousand dollars)

| Use | Quantity | Value |
|--|----------|---------|
| Construction: | | |
| Coarse aggregate (+1½ inch): | | |
| Riprap and jetty stone | W | W |
| Other coarse aggregate | W | W |
| Coarse aggregate, graded: | | |
| Concrete aggregate, coarse | W | W |
| Bituminous surface-treatment aggregate | W | W |
| Railroad ballast | W | W |
| Other graded coarse aggregate | W | W |
| Fine aggregate (- ¾ inch), other | W | W |
| Coarse and fine aggregates: | | |
| Graded road base or subbase | W | W |
| Crusher run or fill or waste | W | W |
| Unspecified: ² | | |
| Reported | 5,800 | 63,500 |
| Estimated | 4,410 | 55,200 |
| Total | 10,500 | 122,000 |

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

¹Data are rounded to no more than three significant digits.

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

TABLE 4
 MASSACHUSETTS: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2009, BY
 USE AND DISTRICT¹

(Thousand metric tons and thousand dollars)

| Use | District 1 | | District 2 | | District 3 | |
|--|------------|--------|------------|--------|------------|--------|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| Construction: | | | | | | |
| Coarse aggregate (+1½ inch) ² | -- | -- | W | W | W | W |
| Coarse aggregate, graded ³ | -- | -- | W | W | W | W |
| Fine aggregate (-¾ inch) ⁴ | -- | -- | -- | -- | W | W |
| Coarse and fine aggregates ⁵ | -- | -- | W | W | W | W |
| Unspecified: ⁶ | | | | | | |
| Reported | 915 | 14,200 | 528 | 4,650 | 4,360 | 44,700 |
| Estimated | 1,940 | 28,200 | 996 | 11,000 | 1,480 | 16,100 |
| Total | 2,860 | 42,400 | 1,560 | 16,000 | 6,130 | 63,800 |

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

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

²Includes riprap and jetty stone and other coarse aggregate.

³Includes concrete aggregate (coarse), bituminous surface-treatment aggregate, railroad ballast and other graded coarse aggregate.

⁴Includes other fine aggregate.

⁵Includes crusher run or fill or waste and graded road base or subbase.

⁶Reported and estimated production without a breakdown by end use.

TABLE 5
 MASSACHUSETTS: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2009,
 BY MAJOR USE CATEGORY¹

| Use | Quantity | Value (thousands) | Unit value |
|---|---------------------------|----------------------|---------------|
| | (thousand metric tons) | | |
| Concrete aggregate | 1,950 | \$18,200 | \$9.30 |
| Concrete products (blocks, bricks, pipe, decorative, etc.) ² | 64 | 547 | 8.55 |
| Asphaltic concrete aggregates and other bituminous mixtures | 330 | 4,790 | 14.53 |
| Road base and coverings ³ | 310 | 3,790 | 12.21 |
| Fill | 713 | 3,820 | 5.36 |
| Snow and ice control | 182 | 2,280 | 12.53 |
| Filtration | 79 | 888 | 11.24 |
| Other miscellaneous uses ⁴ | 78 | 496 | 6.36 |
| Unspecified: ⁵ | | | |
| Reported | 883 | 6,130 | 6.94 |
| Estimated | 4,870 | 44,700 | 9.18 |
| Total or average | 9,460 | 85,600 | 9.05 |

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

²Includes plaster and gunite sands.

³Includes road and other stabilization (cement).

⁴Includes golf course, railroad ballast, and roofing granules.

⁵Reported and estimated production without a breakdown by end use.

TABLE 6
 MASSACHUSETTS: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2009, BY USE AND DISTRICT¹

(Thousand metric tons and thousand dollars)

| Use | District 1 | | District 2 | | District 3 | | Unspecified districts | |
|--|------------|--------|------------|--------|------------|--------|-----------------------|-------|
| | Quantity | Value | Quantity | Value | Quantity | Value | Quantity | Value |
| Concrete aggregates and concrete products ² | 413 | 3,960 | 444 | 4,110 | 1,160 | 10,600 | -- | -- |
| Asphaltic concrete aggregates and road base materials ³ | 202 | 2,900 | 380 | 4,800 | 59 | 879 | -- | -- |
| Fill | 297 | 1,650 | 258 | 1,370 | 157 | 792 | -- | -- |
| Snow and ice control | 49 | 699 | 69 | 714 | 64 | 868 | -- | -- |
| Other miscellaneous uses ⁴ | 7 | 81 | 96 | 807 | 54 | 497 | -- | -- |
| Unspecified: ⁵ | | | | | | | | |
| Reported | 664 | 4,140 | 111 | 980 | 29 | 222 | 79 | 785 |
| Estimated | 961 | 8,430 | 615 | 5,520 | 3,290 | 30,700 | -- | -- |
| Total | 2,590 | 21,900 | 1,970 | 18,300 | 4,820 | 44,600 | 79 | 785 |

-- Zero.

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

²Includes plaster and gunite sands.

³Includes road and other stabilization (cement).

⁴Includes filtration, golf course, railroad ballast, and roofing granules.