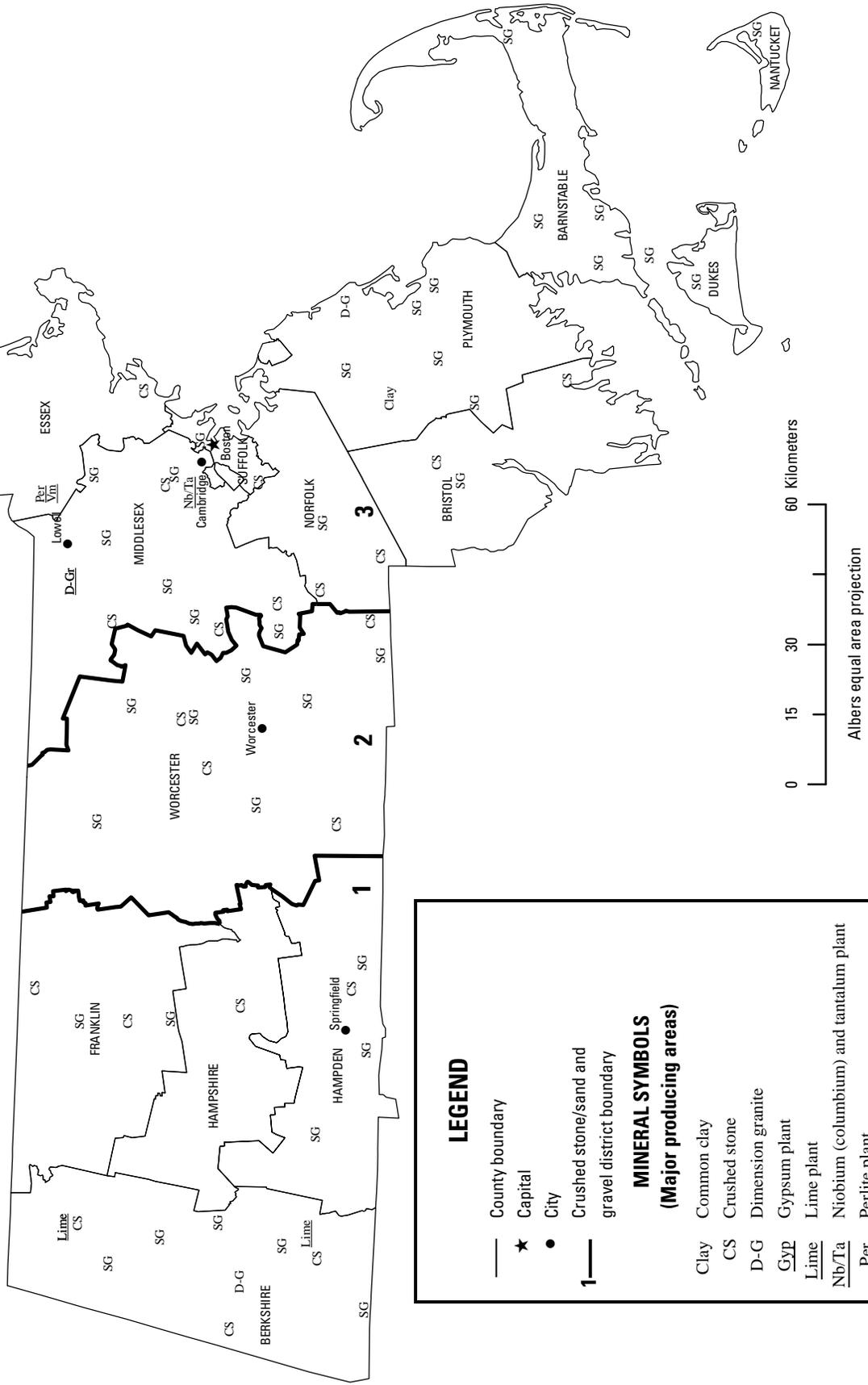




2006 Minerals Yearbook

MASSACHUSETTS

MASSACHUSETTS



LEGEND

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

**MINERAL SYMBOLS
(Major producing areas)**

- Clay
- CS Crushed stone
- D-G Dimension granite
- Gyp Gypsum plant
- Lime Lime plant
- Nb/Ta Niobium (columbium) and tantalum plant
- Per Perlite plant
- SG Construction sand and gravel
- Vm Vermiculite plant

Source: Massachusetts Executive Office of Environmental Affairs/U.S. Geological Survey (2006).

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 2006, Massachusetts nonfuel raw mineral production¹ was valued at \$294 million, based upon annual U.S. Geological Survey data. This was a \$44 million, or a 17.6% increase from the State's total nonfuel mineral value in 2005, which then had increased by \$39 million, up more than 18% from that of 2004. Massachusetts leading nonfuel mineral commodities were, in descending order of value, crushed stone, construction sand and gravel, and lime, the former two commodities accounting for 96% of the State's total value. Because data for lime and

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

All 2006 USGS mineral production data published in this chapter are those available as of March 2008. All USGS Mineral Industry Surveys and USGS Minerals Yearbook chapters—mineral commodity, State, and country—can be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals>.

common clays (2004–06) have been withheld, the State's actual total nonfuel mineral values for 2004–06 are significantly higher than those reported in table 1.

Crushed stone led the State's increase in value in 2006, up by \$28 million (a 23% increase), despite a somewhat marginal decrease in production. Construction sand and gravel production rose by 7%, leading to a \$17 million, or more than 14%, increase in the commodity's value (table 1). With about the same quantities produced as in 2005, the values of dimension stone and gemstones were unchanged. While the value of common clays was up slightly, a relatively small drop in lime production resulted in a slight decrease in the commodity's value. In 2006, the State rose in rank to fourth from fifth in the quantities of dimension stone produced; additionally, the quarries and sand pits in Massachusetts continued to produce significant quantities of crushed stone and construction sand and gravel as compared with that of the other producing States.

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

(Thousand metric tons and thousand dollars)

Mineral	2004		2005		2006	
	Quantity	Value	Quantity	Value	Quantity	Value
Clays, common	36	(3)	37	(3)	36	(3)
Gemstones, natural	NA	1	NA	1	NA	1
Lime	W	(3)	W	(3)	W	(3)
Sand and gravel, construction	14,400	89,900 [†]	16,500	117,000	17,600	134,000
Stone:						
Crushed	13,700	109,000	14,500 [†]	121,000	14,300	149,000
Dimension	82	11,600	82	11,500	82	11,500
Total	XX	211,000	XX	250,000	XX	294,000

[†]Revised. NA Not available. W Withheld to avoid disclosing company proprietary data. XX Not applicable.

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

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

³Value excluded to avoid disclosing company proprietary data.

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

Kind	2005			2006		
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Number of quarries	Quantity (thousand metric tons)	Value (thousands)
Limestone ²	2	1,000	\$16,000	2	887	\$17,600
Dolomite	1	W	W	1	W	W
Granite	9	4,740 ^r	30,900	8	5,180	54,000
Traprock	18	8,180 ^r	68,600	17	7,990	74,600
Miscellaneous stone	1	W	W	(3)	W	W
Total	XX	14,500 ^r	121,000	XX	14,300	149,000

¹Revised. W Withheld to avoid disclosing company proprietary data; included in "Total." 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.

³Sales/distribution yards.

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

(Thousand metric tons and thousand dollars)

Use	Quantity	Value
Construction:		
Coarse aggregate (+1½ inch):		
Riprap and jetty stone	W	W
Other coarse aggregate	969	1,200
Coarse aggregate, graded, other	192	1,640
Fine aggregate (-¾ inch), other	181	2,500
Coarse and fine aggregates:		
Graded road base or subbase	88	726
Unpaved road surfacing	W	W
Crusher run or fill or waste	W	W
Other coarse and fine aggregates	37	324
Other construction materials ²	W	W
Agricultural:		
Limestone	W	W
Poultry grit and mineral food	W	W
Chemical and metallurgical:		
Lime manufacture	W	W
Dead burned dolomite	W	W
Flux stone	W	W
Special:		
Whiting or whiting substitute	W	W
Other fillers or extenders	W	W
Unspecified:³		
Reported	7,270	75,300
Estimated	5,600	50,000
Total	12,900	125,000
Grand total	14,300	149,000

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

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

²Includes building products.

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

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

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1½ inch) ²	W	W	--	--	W	W
Coarse aggregate, graded ³	--	--	--	--	192	1,640
Fine aggregate (¾ inch) ⁴	--	--	--	--	181	2,500
Coarse and fine aggregates ⁵	W	W	--	--	W	W
Other construction materials ⁶	W	W	--	--	--	--
Agricultural ⁷	W	W	--	--	--	--
Chemical and metallurgical ⁸	W	W	--	--	--	--
Special ⁹	W	W	--	--	--	--
Unspecified: ¹⁰						
Reported	--	--	658	5,810	6,610	69,500
Estimated	2,400	21,000	2,400	21,000	870	7,700
Total	3,020	36,100	3,060	27,000	8,230	86,200

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 other graded coarse aggregate.

⁴Includes other fine aggregate.

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

⁶Includes building products.

⁷Includes agricultural limestone and poultry grit and mineral food.

⁸Includes lime manufacture, dead-burned dolomite, and flux stone.

⁹Includes whiting or whiting substitute and other fillers or extenders.

¹⁰Reported and estimated production without a breakdown by end use.

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

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate (including concrete sand)	4,050	\$34,200	\$8.43
Plaster and gunite sands	48	447	9.35
Concrete products (blocks, bricks, pipe, decorative, etc.)	80	701	8.77
Asphaltic concrete aggregates and other bituminous mixtures	175	2,310	13.16
Road base and coverings	702	5,650	8.05
Fill	1,600	7,240	4.53
Snow and ice control	284	2,030	7.16
Filtration	460	2,860	6.21
Other miscellaneous uses	58	704	12.13
Unspecified: ²			
Reported	2,930	21,800	7.45
Estimated	7,230	55,600	7.69
Total or average	17,600	134,000	7.58

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

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

TABLE 6
 MASSACHUSETTS: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2006, BY USE AND DISTRICT¹

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregates and concrete products ²	1,340	13,800	1,020	5,620	1,820	15,900
Asphaltic concrete aggregates and road base materials	214	2,640	303	3,160	359	2,150
Fill	617	2,510	359	1,550	621	3,180
Ice and snow control ³	20	176	576	3,790	149	925
Other miscellaneous uses	--	--	58	704	--	--
Unspecified: ⁴						
Reported	430	2,400	600	4,260	1,900	15,100
Estimated	2,160	16,400	771	5,950	4,310	33,200
Total	4,780	37,900	3,690	25,000	9,150	70,500

-- Zero.

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

²Includes plaster and gunite sands.

³Includes filtration.

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