

MASSACHUSETTS

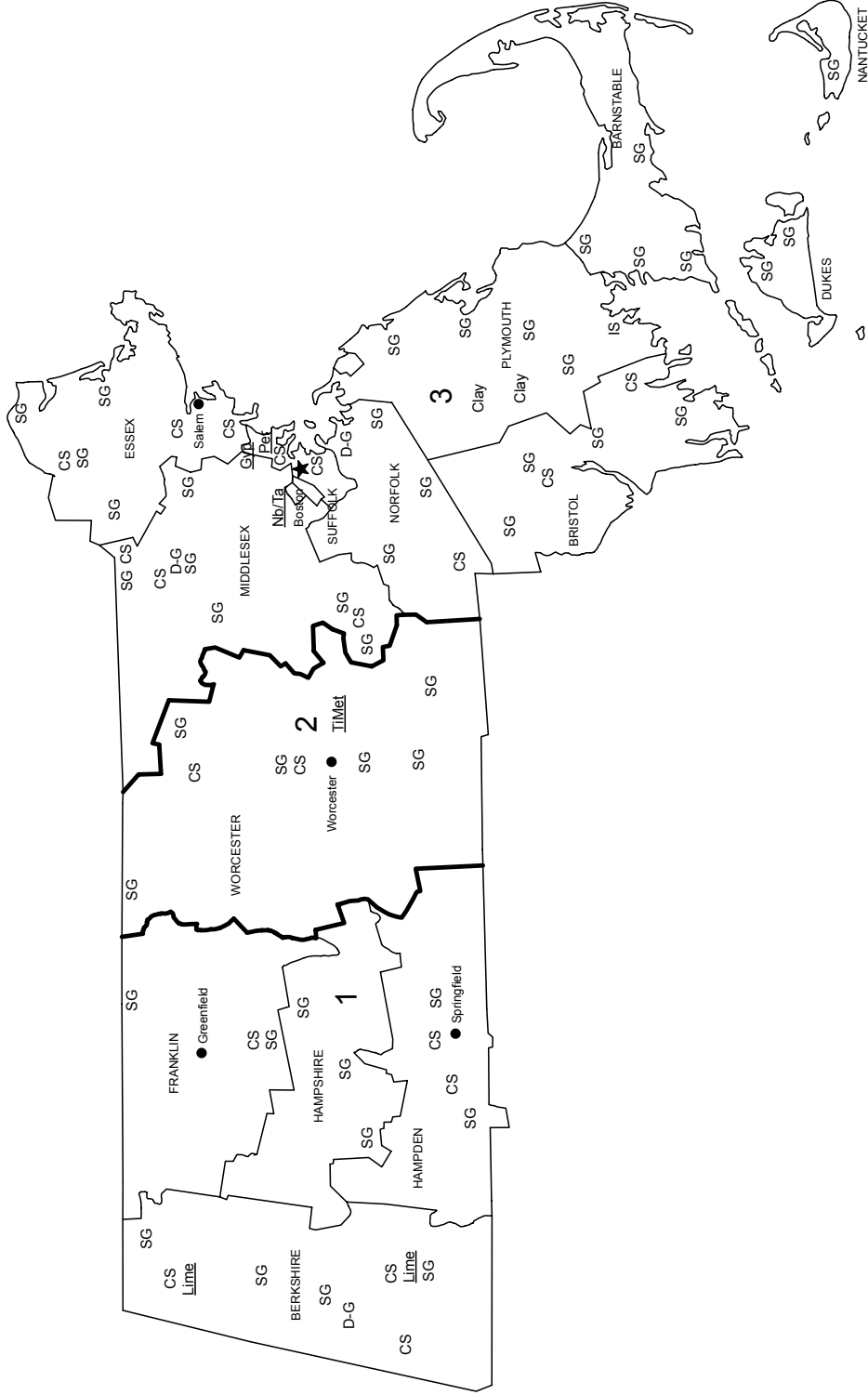
LEGEND

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

MINERAL SYMBOLS (Major producing areas)

- Clay
- CS Crushed stone
- D-G Dimension granite
- GYP Gypsum plant
- IS Industrial sand
- Lime
- Nb/Ta Columbium/tantalum plant
- Per Perite plant
- SG Construction sand and gravel
- TiMet Titanium metal plant

0 20 Kilometers



THE MINERAL INDUSTRY OF MASSACHUSETTS

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

In 2004, Massachusetts nonfuel raw mineral production was valued¹ at \$210 million, based upon annual U.S. Geological Survey data. This was a 3% increase from that of 2003,² which was up about 3%, from 2002.

Massachusetts leading nonfuel mineral commodities by value were crushed stone, construction sand and gravel, and lime, the former two commodities accounting for about 95% of the State's total value. Because data for lime and common clays (2004) have been withheld, the State's actual total nonfuel mineral values for 2002-04 are higher than those reported in table 1.

In 2004, construction sand and gravel, with an 11.6% increase in production, had the largest increase in value, up nearly \$9 million, leading to Massachusetts rise in total nonfuel mineral value for the year. This was offset somewhat by a \$2 million decrease in the value of crushed stone, despite an increase in production of 4.6% (table 1). The value of dimension stone was up slightly and that of lime decreased by about \$1 million. Common clays and gemstones were unchanged. In 2004, the State rose to fifth from sixth in the quantities of dimension stone produced, and additionally, Massachusetts quarries and sand pits produced significant quantities of crushed stone and construction sand and gravel.

In 2003, increased production of construction sand and gravel, value of which was up \$5.6 million, also led the State's increase in value for the year. With the exception of lime, the value of which was up about \$3 million, other mineral commodities were relatively unchanged (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 2004 USGS mineral production data published in this chapter are those available as of December 2005. All USGS Mineral Industry Surveys and USGS Minerals Yearbook chapters—mineral commodity, State, and country—also can be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals>.

²Values, percentage calculations, and rankings for 2003 may differ from the Minerals Yearbook, Area Reports: Domestic 2003, Volume II, owing to the revision of preliminary 2003 to final 2003 data. Data and rankings for 2004 are considered to be final and are not likely to change significantly.

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

(Thousand metric tons and thousand dollars)

Mineral	2002		2003		2004	
	Quantity	Value	Quantity	Value	Quantity	Value
Clays, common	36	321	36	321	36	(3)
Gemstones	NA	1	NA	1	NA	1
Lime	W	(3)	W	(3)	W	(3)
Sand and gravel, construction	12,200	75,300	12,900	80,800	14,400	90,000
Stone:						
Crushed	13,800	111,000 [†]	13,000	111,000	13,600	109,000
Dimension	81	11,300	81	11,300	82	11,600
Total	XX	198,000 [†]	XX	204,000	XX	210,000

[†]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	2002				2003				2004			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone ²	3	977	\$13,400	\$13.74	2	1,050	\$15,400	\$14.75	2	983	\$15,300	\$15.54
Dolomite	1	W	W	4.46	1	W	W	12.68	1	W	W	12.39
Granite	9	5,350	40,000 ^r	7.46 ^r	10	4,900	37,300	7.61	9	3,850	29,300	7.61
Traprock	18	6,970	54,200	7.77	17	6,560	53,900	8.21	18	8,320	59,100	7.11
Miscellaneous stone	2	W	W	8.56	1	W	W	8.61	1	W	W	8.59
Total or average	XX	13,800	111,000 ^r	8.04 ^r	XX	13,000	111,000	8.59	XX	13,600	109,000	7.98

^rRevised. W Withheld to avoid disclosing company proprietary data; included in "Total or average." XX Not applicable.

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

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

TABLE 3a

MASSACHUSETTS: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2003, BY USE¹

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Construction:			
Coarse aggregate (+1½ inch):			
Riprap and jetty stone	W	W	\$10.03
Filter stone	W	W	8.83
Other coarse aggregates	121	\$1,120	9.28
Total or average	136	1,270	9.37
Coarse aggregate, graded:			
Concrete aggregate, coarse	W	W	7.29
Other graded coarse aggregates	W	W	7.05
Total or average	678	4,830	7.12
Fine aggregate (-¾ inch):			
Stone sand, concrete	W	W	7.67
Screening, undesignated	W	W	8.84
Other fine aggregate	191	1,620	8.48
Total or average	252	2,090	8.29
Coarse and fine aggregates:			
Graded road base or subbase	W	W	14.64
Unpaved road surfacing	W	W	12.63
Crusher run or fill or waste	W	W	13.02
Total or average	368	4,780	12.98
Other construction materials, building products	(2)	(2)	27.27
Agricultural:			
Agricultural limestone	(2)	(2)	14.87
Poultry grit and mineral food	(2)	(2)	14.87
Chemical and metallurgical:			
Lime manufacture	(2)	(2)	8.54
Dead burned dolomite	(2)	(2)	14.64
Flux stone	(2)	(2)	14.64
Special:			
Whiting or whiting substitute	(2)	(2)	14.64
Other fillers or extenders	(2)	(2)	60.08
Unspecified:³			
Reported	8,930	71,700	8.04
Estimated	1,900	14,000	7.52
Total or average	10,800	85,900	7.95
Grand total or average	13,000	111,000	8.59

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

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

²Withheld to avoid disclosing company proprietary data; included in "Grand total or average."

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

TABLE 3b

MASSACHUSETTS: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2004, BY USE¹

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Construction:			
Coarse aggregate (+1½ inch):			
Macadam	W	W	\$7.68
Riprap and jetty stone	W	W	7.21
Filter stone	W	W	3.86
Other coarse aggregates	251	\$2,050	8.15
Total or average	434	3,290	7.57
Coarse aggregate, graded:			
Concrete aggregate, coarse	W	W	8.27
Bituminous aggregate, coarse	W	W	8.36
Bituminous surface-treatment aggregate	W	W	8.28
Railroad ballast	W	W	10.16
Other graded coarse aggregates	202	1,730	8.55
Total or average	1,460	12,200	8.36
Fine aggregate (-¾ inch):			
Stone sand, concrete	W	W	6.93
Stone sand, bituminous mix or seal	W	W	4.87
Other fine aggregate	52	374	7.19
Total or average	1,090	5,600	5.14
Coarse and fine aggregates:			
Graded road base or subbase	W	W	7.59
Unpaved road surfacing	W	W	11.97
Crusher run or fill or waste	512	4,740	9.25
Other coarse and fine aggregates	48	568	11.83
Total or average	943	8,450	8.96
Other construction materials, building products	(2)	(2)	26.65
Agricultural:			
Agricultural limestone	(2)	(2)	14.90
Poultry grit and mineral food	(2)	(2)	15.05
Chemical and metallurgical:			
Lime manufacture	(2)	(2)	8.54
Dead burned dolomite	(2)	(2)	14.64
Flux stone	(2)	(2)	14.66
Special:			
Whiting or whiting substitute	(2)	(2)	14.64
Other fillers or extenders	(2)	(2)	58.08
Unspecified:³			
Reported	2,810	20,600	7.33
Estimated	6,200	46,000	7.42
Total or average	9,030	66,800	7.39
Grand total or average	13,600	109,000	7.98

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

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

²Withheld to avoid disclosing company proprietary data; included in "Grand total or average."

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

TABLE 4a

MASSACHUSETTS: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2003, 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	W	W
Coarse aggregate, graded ³	--	--	W	W	W	W
Fine aggregate (-¾ inch) ⁴	W	W	W	W	--	--
Coarse and fine aggregates ⁵	W	W	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	1,680	13,000	1,030	9,120	6,210	49,600
Estimated	290	2,100	580	4,300	1,000	7,700
Total	2,770	28,700	1,940	16,700	8,240	65,900

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, filter stone, and other coarse aggregates.³Includes concrete aggregate (graded) and other graded coarse aggregates.⁴Includes stone sand (concrete), screening (undesignated), and other fine aggregate.⁵Includes crusher run (select material or fill), graded road base or subbase, and unpaved road surfacing.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 4b

MASSACHUSETTS: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2004, 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	W	W
Coarse aggregate, graded ³	W	W	W	W	W	W
Fine aggregate (-¾ inch) ⁴	W	W	W	W	W	W
Coarse and fine aggregates ⁵	W	W	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	1,550	12,000	369	3,010	889	5,610
Estimated	130	970	600	4,500	5,500	41,000
Total	2,790	28,900	2,300	17,300	8,550	62,500

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 macadam, filter stone, riprap and jetty stone, and other coarse aggregates.³Includes concrete aggregate (coarse), bituminous aggregate (coarse), bituminous surface-treatment aggregate, and railroad ballast, and other graded coarse aggregates.⁴Includes stone sand (concrete), stone sand (bituminous mix or seal), and 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 5a
 MASSACHUSETTS: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2003,
 BY MAJOR USE CATEGORY¹

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate (including concrete sand)	2,570	\$16,600	\$6.46
Plaster and gunite sands	106	938	8.87
Concrete products (blocks, bricks, pipe, decorative, etc.)	43	357	8.30
Asphaltic concrete aggregates and other bituminous mixtures	205	2,540	12.40
Road base and coverings	599	4,020	6.72
Fill	1,320	4,500	3.39
Snow and ice control	249	1,790	7.20
Other miscellaneous uses ²	62	488	7.84
Unspecified: ³			
Reported	1,540	9,270	6.01
Estimated	6,200	40,000	6.47
Total or average	12,900	80,800	6.26

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

²Includes filtration.

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

TABLE 5b
 MASSACHUSETTS: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2004,
 BY MAJOR USE CATEGORY¹

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate (including concrete sand)	1,560	\$13,500	\$8.63
Plaster and gunitite sands	75	811	10.80
Concrete products (blocks, bricks, pipe, decorative, etc.)	458	4,480	9.79
Asphaltic concrete aggregates and other bituminous mixtures	219	1,830	8.38
Road base and coverings	824	3,870	4.70
Fill	1,200	4,100	3.40
Snow and ice control	219	1,480	6.77
Other miscellaneous uses ²	203	800	3.94
Unspecified: ³			
Reported	1,450	9,150	6.31
Estimated	8,200	50,000	6.07
Total or average	14,400	90,000	6.23

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

²Includes filtration.

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

TABLE 6a
 MASSACHUSETTS: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2003, BY USE AND DISTRICT¹

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products ²	379	2,540	696	3,390	1,640	12,000
Asphaltic concrete aggregates and road base materials	199	2,560	326	2,370	279	1,650
Fill	233	681	309	872	782	2,940
Snow and ice control	83	703	75	514	91	573
Other miscellaneous uses ³	18	172	44	316	--	--
Unspecified: ⁴						
Reported	1,150	6,950	9	43	379	2,280
Estimated	1,100	6,100	1,600	8,900	3,600	25,000
Total	3,120	19,700	3,010	16,400	6,800	44,600

-- 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.

TABLE 6b
 MASSACHUSETTS: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2004, 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	W	W	W	W	1,520	15,000
Asphaltic concrete aggregates and road base materials	W	W	634	2,400	W	W
Fill	268	911	369	1,020	566	2,160
Snow and ice control	W	W	105	546	W	W
Other miscellaneous uses ³	441	4,120	549	2,400	311	2,290
Unspecified: ⁴						
Reported	795	3,730	278	1,700	376	3,720
Estimated	1,200	7,300	2,300	12,000	4,700	30,000
Total	2,750	16,100	4,220	20,500	7,480	53,400

W Withheld to avoid disclosing company proprietary data; included in "Other miscellaneous uses."

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.