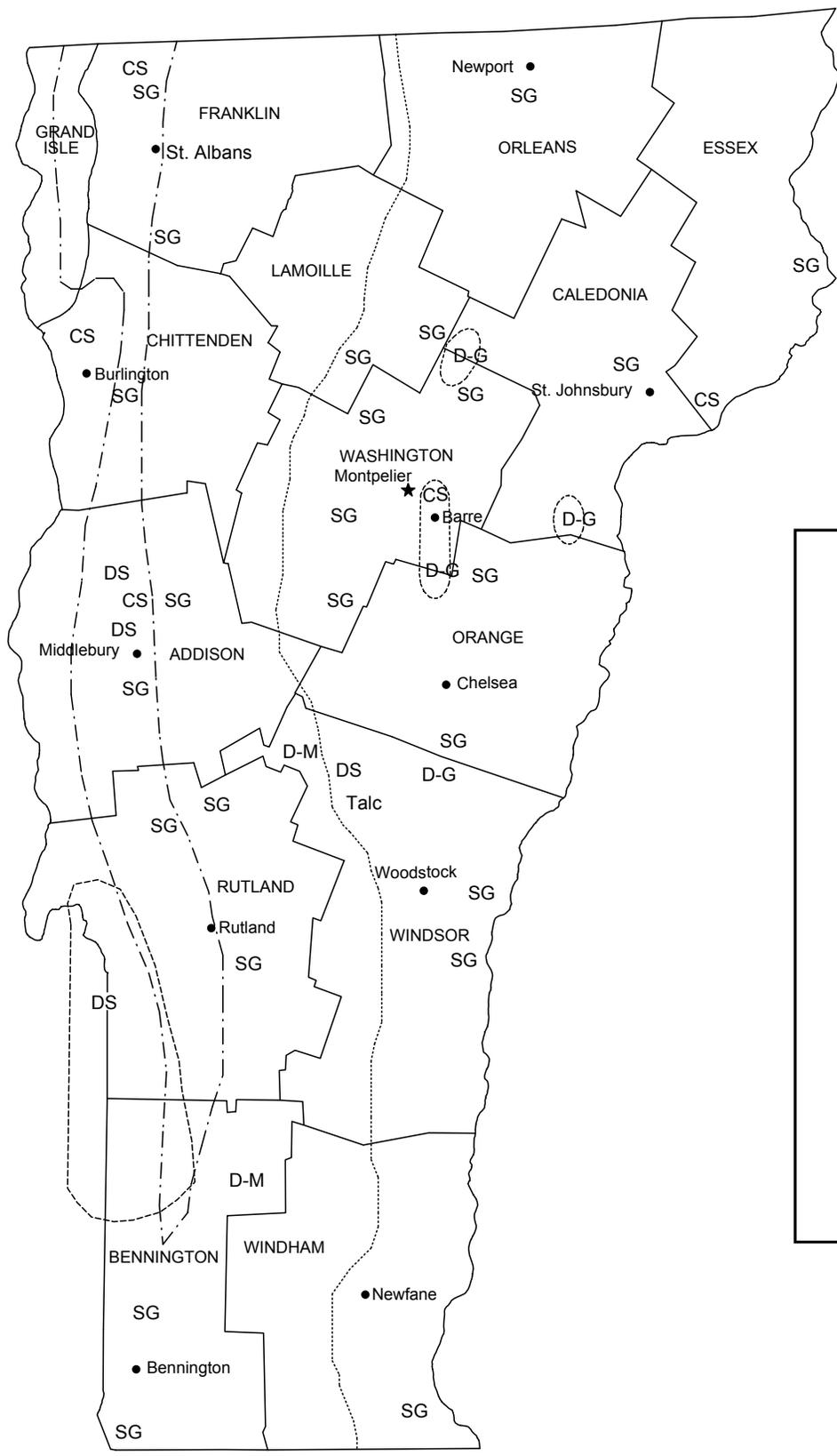


VERMONT



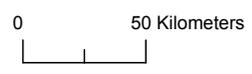
LEGEND

- County boundary
- ★ Capital
- City

**MINERAL SYMBOLS
(Major producing areas)**

- CS Crushed stone
- D-G Dimension granite
- D-M Dimension marble
- DS Dimension stone
- SG Construction sand and gravel
- Talc Talc

- Concentration of mineral operations
- ⊖ VT limestone-marble belt
- ⋯ Ultramafic trend, includes asbestos, talc, and verde antique operations



Source: Vermont Geological Survey/U.S. Geological Survey (2004)

THE MINERAL INDUSTRY OF VERMONT

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

In 2004, Vermont's nonfuel raw mineral production was valued¹ at \$85.4 million, based upon annual U.S. Geological Survey (USGS) data. This was a nearly 19% increase from the State's total nonfuel mineral value for 2003,² which was up 1.7% from 2002. (Because data for talc have been withheld to avoid disclosing company proprietary data, the actual total values for 2002-04 are higher than those reported in table 1.)

In 2004, crushed stone and dimension stone were Vermont's leading nonfuel mineral commodities, accounting for a nearly identical 36.1% and 35.8%, respectively, of the State's publishable nonfuel mineral production value. All three of the State's major nonfuel mineral commodities (construction sand and gravel, crushed stone, and dimension stone) showed increases in value. A 19% increase in crushed stone production led to a 29%, or nearly \$7 million, increase in the commodity's value. With slightly less production for the year, but a higher average unit value, the overall value of dimension stone rose nearly \$4 million. Construction sand and gravel production also increased, its value up nearly \$2.9 million (table 1). In 2004, Vermont continued to be ranked third in the quantity of talc produced among 6 States and was fourth (third in 2003) among the States that produced dimension stone.

In 2003, a \$2.6 million increase in the value of crushed stone outweighed decreases in construction sand and gravel and dimension stone, resulting in an increase for the year (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>.

² Values, 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 VERMONT^{1,2}

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2002		2003		2004	
	Quantity	Value	Quantity	Value	Quantity	Value
Gemstones	NA	1	NA	1	NA	1
Sand and gravel, construction	4,990	22,200	4,520	21,100	4,970	24,000
Stone:						
Crushed	4,360	21,300	4,290	23,900	5,110	30,800
Dimension	101	27,000	102	26,700	100	30,600
Talc, crude	W	(3)	W	(3)	W	(3)
Total	XX	70,600	XX	71,800	XX	85,400

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 no more than three significant digits; may not add to totals shown.

³Value excluded to avoid disclosing company proprietary data.

TABLE 2
VERMONT: 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	6	1,680	\$7,160	\$4.26	6	1,180	\$6,620	\$5.61	6	1,400	\$7,840	\$5.61
Dolomite	3	W	W	8.00	3	W	W	8.29	3	W	W	8.32
Granite	3	192	1,250	6.51	3	346	2,960	8.55	3	258	2,250	8.72
Marble	1	W	W	4.08	1	W	W	4.08	1	W	W	4.08
Quartzite	1	W	W	4.74	1	W	W	4.74	2	W	W	8.60
Slate	1	W	W	4.85	1	W	W	4.96	1	W	W	4.90
Total or average	XX	4,360	21,300	4.88	XX	4,290	23,900	5.57	XX	5,110	30,800	6.03

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; may not add to totals shown.

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

TABLE 3a
VERMONT: 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):			
Macadam	W	W	\$6.95
Riprap and jetty stone	7	\$72	10.29
Filter stone	34	280	8.23
Total or average	41	352	8.59
Coarse aggregate, graded:			
Concrete aggregate, coarse	25	248	9.92
Bituminous aggregate, coarse	(2)	(2)	11.59
Bituminous surface-treatment aggregate	(2)	(2)	12.68
Railroad ballast	(2)	(2)	9.09
Total or average	161	1,790	11.10
Fine aggregate (-¾ inch):			
Stone sand, bituminous mix or seal	(2)	(2)	8.82
Screening, undesignated	(2)	(2)	8.21
Total or average	37	315	8.51
Coarse and fine aggregates:			
Graded road base or subbase	311	2,540	8.16
Unpaved road surfacing	209	1,200	5.75
Crusher run or fill or waste	(3)	(3)	4.68
Other coarse and fine aggregates	129	712	5.52
Total or average	649	4,450	6.86
Unspecified:⁴			
Reported	977	6,010	6.15
Estimated	2,400	11,000	4.52
Total or average	3,410	17,000	4.99
Grand total or average	4,290	23,900	5.57

W Withheld to avoid disclosing company proprietary data; included in "Unspecified: Reported."

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 "Total or average."

³Withheld to avoid disclosing company proprietary data; included with "Other coarse and fine aggregates."

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

TABLE 3b

VERMONT: 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):			
Riprap and jetty stone	W	W	\$9.27
Filter stone	W	W	11.49
Other coarse aggregates	9	\$53	5.69
Total or average	51	459	9.00
Coarse aggregate, graded:			
Concrete aggregate, coarse	W	W	10.49
Bituminous aggregate, coarse	W	W	11.57
Bituminous surface-treatment aggregate	W	W	11.57
Railroad ballast	W	W	9.65
Other graded coarse aggregates	16	87	5.44
Total or average	223	2,350	10.52
Fine aggregate (-¾ inch):			
Stone sand, bituminous mix or seal	W	W	8.82
Screening, undesignated	W	W	7.99
Other fine aggregates	2	5	2.50
Total or average	68	549	8.07
Coarse and fine aggregates:			
Graded road base or subbase	267	2,270	8.50
Unpaved road surfacing	136	979	7.20
Crusher run or fill or waste	(2)	(2)	8.54
Other coarse and fine aggregates	394	2,110	5.35
Total or average	797	5,360	6.72
Unspecified:³			
Reported	912	5,590	6.12
Estimated	3,100	17,000	5.40
Total or average	3,970	22,100	5.56
Grand total or average	5,110	30,800	6.03

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 with "Other coarse and fine aggregates."

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

TABLE 4a

VERMONT: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2003, BY MAJOR USE CATEGORY¹

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate and concrete products ²	157	\$1,130	\$7.20
Asphaltic concrete aggregates and road base materials ³	670	3,330	4.97
Fill	153	467	3.05
Snow and ice control	172	748	4.35
Other miscellaneous uses	28	183	6.54
Unspecified: ⁴			
Reported	682	3,780	5.55
Estimated	2,700	12,000	4.26
Total or average	4,520	21,100	4.68

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).

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

TABLE 4b

VERMONT: 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) ²	221	\$1,630	\$7.39
Asphaltic concrete aggregates and road base materials	781	4,050	5.19
Fill	228	470	2.06
Snow and ice control	191	822	4.31
Other miscellaneous uses ³	16	146	9.33
Unspecified: ⁴			
Reported	878	4,930	5.61
Estimated	2,600	12,000	4.49
Total or average	4,970	24,000	4.82

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.