

# THE MINERAL INDUSTRY OF VERMONT

This chapter has been prepared under a Memorandum of Understanding between the U.S. Bureau of Mines, U.S. Department of the Interior, and the Agency of Natural Resources, Division of Geology and Mineral Resources, for collecting information on all nonfuel minerals.

In 1996, for the third consecutive year, Vermont ranked 46th among the 50 States in total nonfuel mineral production value,<sup>1</sup> according to the U.S. Geological Survey (USGS). The estimated value for 1996 was \$67 million, about an 11% increase from that of 1995. This followed a more than 18% increase from 1993 to 1994 and a 3% decrease from 1994 to 1995 (based on revised, final 1994 and final 1995 data). The State accounted for somewhat less than 0.5% of the U.S. total nonfuel mineral production value. Compared with 1995, the mineral commodity values that increased in 1996 were those of construction sand and gravel and dimension stone, while crushed stone and talc values showed small decreases. Talc production and value are not included in table 1 because the data have been withheld to protect company proprietary data. Compared with USGS estimates of the quantities produced in the 50 States during 1996, Vermont decreased in rank from third to fourth in talc and from fourth to fifth in dimension stone.

According to the Vermont Geological Survey,<sup>2</sup> construction sand and gravel value increased by nearly \$5 million and dimension stone by \$2.3 million. No new quarries were opened during the year, and there was no active mineral exploration reported in the State. However,

there was some activity in the State's talc industry. Luzenac America Inc., the owner of all talc operations in Vermont, reported that the expansion of its Argonaut Mine in Ludlow was proceeding as planned. In 1996, the company's business had increased. Luzenac America had begun this project in 1994 in order to gain access to more and to make more efficient use of the ore body.

<sup>1</sup>The terms "nonfuel mineral production" and related "values" encompass variations in meaning, depending on the minerals or 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 1996 USGS mineral production data published in this chapter are estimates as of February 1997. Construction sand and gravel and crushed stone estimates are updated periodically. To obtain the most current information, please contact the appropriate USGS mineral commodity specialist. Call MINES FaxBack at (703) 648-4999 from a fax machine with a touch-tone handset, and request Document # 1000 for a telephone listing of all mineral commodity specialists, or call USGS information at (703) 648-4000 for the specialist's name and number. This telephone listing may also be retrieved over the Internet at <http://minerals.er.usgs.gov/minerals/contacts/comdir.html>

<sup>2</sup>Marjorie Gale, Information and Education Specialist at the Vermont Geological Survey, submitted the information provided by that agency.

TABLE 1  
NONFUEL RAW MINERAL PRODUCTION IN VERMONT 1/ 2/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1994		1995		1996 p/	
	Quantity	Value	Quantity	Value	Quantity	Value
Asbestos metric tons	1,130	920	--	--	--	--
Gemstones	NA	1	NA	1	NA	1
Sand and gravel (construction)	3,890	14,500	3,220	11,000	4,200	15,800
Stone:						
Crushed	4,170	23,700	4,420	20,700	4,200	20,000
Dimension metric tons	78,900	23,200	100,000	28,700	107,000	31,000
Total 3/	XX	62,300	XX	60,400	XX	66,800

p/ Reliminary. NA Not available. XX Not applicable.

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

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

3/ Partial total; excludes values that must be concealed to avoid disclosing company proprietary data.

TABLE 2  
VERMONT: CRUSHED STONE 1/ SOLD OR USED BY PRODUCERS IN 1995, BY USE 2/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Coarse aggregate (+1 1/2 inch): Other coarse aggregate 3/	24	\$192	\$8.00
Coarse aggregate, graded: Other graded coarse aggregate 4/	375	3,390	9.04
Coarse and fine aggregates:			
Graded road base or subbase	176	1,350	7.66
Other construction materials 5/	383	2,350	6.14
Agricultural: Other agricultural uses	145	620	4.28
Unspecified: 6/			
Actual	638	2,460	3.85
Estimated	2,680	10,300	3.85
Total	4,420	20,700	4.68

- 1/ Includes dolomite, granite, limestone, marble, quartzite, and slate.  
2/ Data are rounded to three significant digits; may not add to totals shown.  
3/ Includes filter stone and riprap and jetty stone.  
4/ Includes bituminous aggregate (coarse), concrete aggregate (coarse), and railroad ballast.  
5/ Includes graded road base or subbase, stone sand (bituminous mix or seal), and stone sand (concrete).  
6/ Includes production reported without a breakdown by use and estimates for nonrespondents.

TABLE 3  
VERMONT: CRUSHED STONE SOLD OR USED, BY KIND 1/

Kind	1994				1995			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone	9 r/	2,260 r/	\$12,800 r/	\$5.68 r/	7	2,220	\$8,380	\$3.77
Dolomite	4	234	1,220	5.22	6	W	W	5.38
Marble	5	839	4,730	5.63	2	W	W	3.90
Granite	2 r/	W	W	7.78 r/	2	48	W	W
Quartzite	2	W	W	5.37	2	W	W	W
Slate	1	W	W	9.45	1	W	W	9.61
Total	XX	4,170	23,700	5.68	XX	4,420	20,700	4.68

- r/ Revised. W Withheld to avoid disclosing company proprietary data; included in "Total." XX Not applicable.  
1/ Data are rounded to three significant digits; may not add to totals shown.

TABLE 4  
VERMONT: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1995,  
BY MAJOR USE CATEGORY 1/

Use	Quantity (thousand metric tons)	Value (thousands)	Value per ton
Concrete aggregate (including concrete sand) 2/	393	\$1,750	\$4.45
Asphaltic concrete aggregates and other bituminous mixtures	151	680	4.50
Road base and coverings 3/	991	2,970	3.00
Fill	243	676	2.78
Snow and ice control	220	581	2.64
Other 4/	106	441	4.16
Unspecified: 5/			
Actual	326	1,570	4.80
Estimated	787	2,360	3.00
Total or average	3,220	11,000	3.43

- 1/ Data are rounded to three significant digits; may not add to totals shown.  
2/ Includes plaster and gunite sands.  
3/ Includes road and other stabilization (cement).  
4/ Includes filtration and railroad ballast.  
5/ Includes production reported without a breakdown by end use and estimates for nonrespondents.