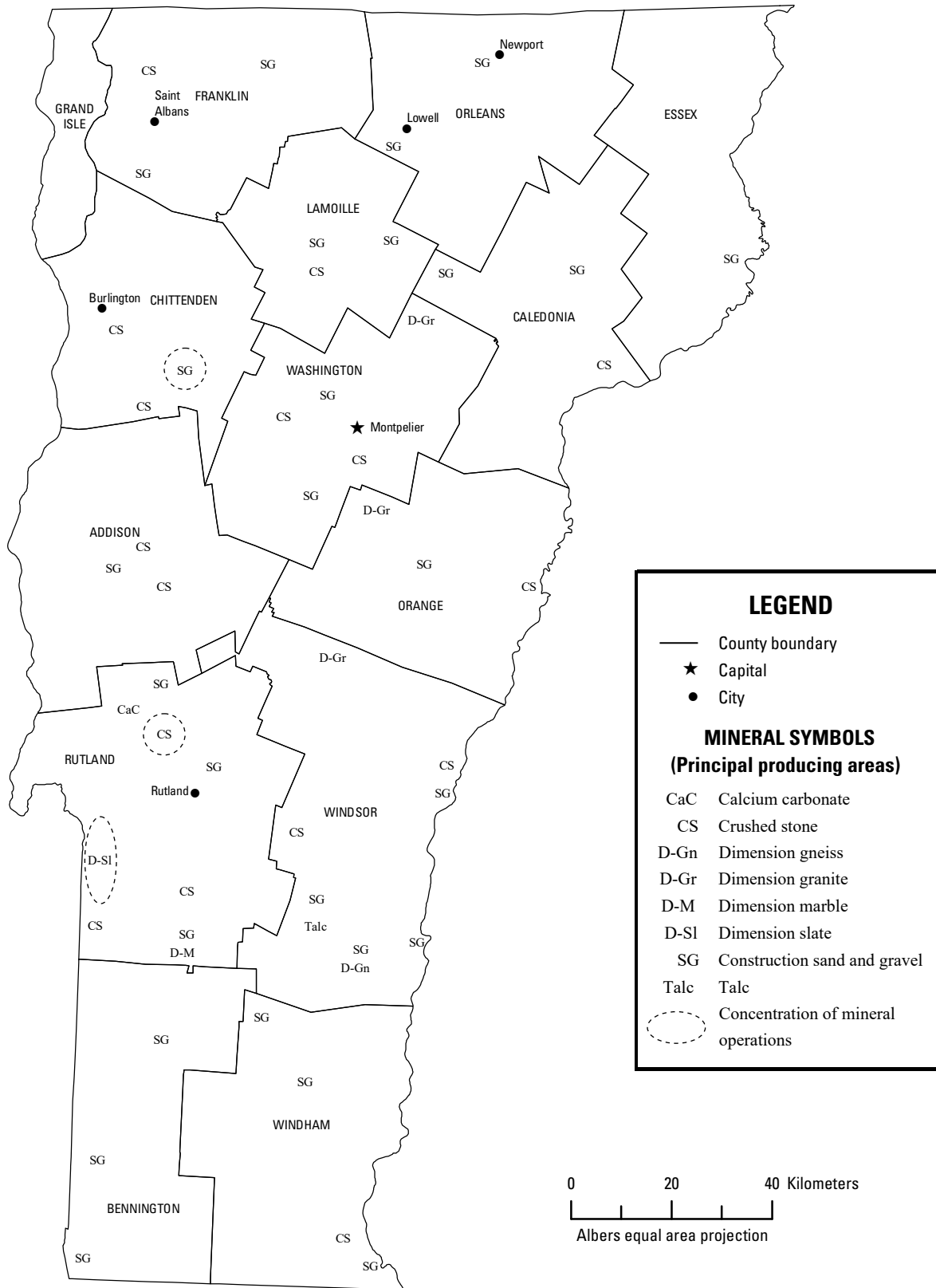




2010–2011 Minerals Yearbook

VERMONT

VERMONT



Source: Vermont Geological Survey/U.S. Geological Survey (2010–11).

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 2011, Vermont's nonfuel mineral production¹ was valued at \$118 million, based upon annual U.S. Geological Survey (USGS) data. This was a 4% decrease from the State's total reportable nonfuel mineral production value of \$122 million in 2010, which followed a slight decrease from a total of almost \$123 million in 2009. The State decreased in rank to 46th from 44th among the 50 States in reportable nonfuel mineral production value, accounting for less than one-fifth of 1% of the U.S. total. Vermont produced crude talc, however, these data were withheld to conceal company proprietary data and are not included in the State's total nonfuel mineral production value. On a per capita basis, Vermont ranked 18th with a value of \$188; the national average was \$240.

In 2010 and 2011, crushed stone, construction sand and gravel, and dimension stone, in descending order of production value, remained Vermont's leading nonfuel mineral commodities. Crushed stone and construction sand and gravel accounted for 81% of the State's reportable nonfuel mineral production value in both 2010 and 2011, an increase from 76% in 2009. This change was the result of a 37% drop in the production value of dimension stone in 2010 from 2009, associated with a 58% drop in quantity. Despite a 7% increase in production quantity, sand and gravel decreased 3% in production value in 2010 from 2009. A 14% increase in production value of crushed stone associated with a 12% increase in production quantity prevented any significant decline in the State's total mineral production value. In 2011, though dimension stone was relatively stable, construction sand and gravel had a loss in production value of 5%, despite a 5% increase in the quantity produced. Crushed stone also decreased in production value, by 4%, associated with a 3% reduction in quantity produced. This led to the decrease in the State's total reportable production value in 2011.

In 2011, Vermont continued to rank third in the quantity of crude talc produced among the four talc-producing States (values withheld—company proprietary data). The State remained 37th in the production of crushed stone and 9th in the production of dimension stone in 2010 and 2011.

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 USGS mineral production data published in this chapter are those available as of May 2013. Data in this report are rounded to three significant digits and percentages are calculated from unrounded data. All USGS Mineral Industry Surveys and USGS Minerals Yearbook chapters—mineral commodity, State, and country—can be retrieved over the Internet at <http://minerals.usgs.gov/minerals>.

The Vermont Geological Survey² (VGS), a part of the Department of Environmental Conservation, provided the following narrative information.

Overview

In 2010, Vermont issued five sand and gravel extraction permits and amendments through Vermont's Land Use and Development Law, known as Act 250. Four of the permits were to reopen or expand existing operations. These operations had permitted extraction rates that varied up to a maximum of 76,000 cubic meters (100,000 cubic yards) total over a 10-year period. Three other permit applications were submitted for Act 250 review in 2010, including amendments to the reclamation plan at the Hamm Mine in Windham, Windham County; revision of the sand and gravel operation plan in Bristol, Addison County; and the reopening of a dormant quarry in Milton, Chittenden County. The VGS reviews projects for Act 250 consideration on lands with high potential for extraction of mineral and earth resources, in addition to providing recommendations regarding mine and quarry reclamation plans.

Commodity Review

Industrial Minerals

Stone, Dimension.—Rock of Ages Corp. (Barre, VT) and Northeast Minerals Group (Graniteville, VT) developed a plan to sell and transport approximately 49,000 metric tons of waste granite from Rock of Ages' quarries near Websterville to the U.S. Army Corps of Engineers for use in marine control systems and dike structures in and around Lake Okeechobee, FL. Rock of Ages estimated that it had a stockpile of 36 million metric tons of easily accessible waste granite near Barre. The rock was to be shipped via a revitalized section of railroad between Barre and Montpelier Junction (Barre-Montpelier Times Argus, 2010).

Reference Cited

Barre-Montpelier Times Argus, 2010, Official—Granite trains will start shipping in late May: Barre-Montpelier [VT] Times Argus, May 8. (Accessed December 3, 2014, at http://www.aslrra.org/images/news_file/Afternoon_Report_05_10_10.pdf.)

²Marjorie Gale, Environmental Scientist V, a geologist with the Vermont Geological Survey, authored the text of the State mineral industry information provided by that agency. The Vermont Geological Survey is also known as the Division of Geology and Mineral Resources.

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

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2009			2010			2011		
	Quantity	Value	Unit	Quantity	Value	Unit	Quantity	Value	Unit
Gemstones, natural	NA	I	NA	NA	I	NA	NA	I	NA
Sand and gravel, construction Stone:	4,470	36,700	4,820	35,600	5,050	33,700			
Crushed	5,480 ^r	55,900 ^r	6,240	64,700	6,070	62,100			
Dimension	108	30,000	68	21,900	79	21,800			
Talc, crude	W	W	W	W	W	W			
Total	XX	123,000 ^r	XX	122,000	XX	118,000			

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

TABLE 2
VERMONT: CRUSHED STONE SOLD OR USED IN THE UNITED STATES, BY TYPE¹

Type	2009			2010			2011					
	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	10	1,860 ^r	\$18,800 ^r	\$10.10	10	2,000	\$19,500	\$9.79	9	1,880	\$18,000	\$9.59
Dolomite	--	--	--	--	--	--	--	--	1	81	682	8.43
Marble	--	--	--	--	1	1,400	14,200	10.13	1	1,320	13,900	10.54
Granite	--	--	--	--	2	479	5,500	11.49	2	299	3,210	10.72
Traprock	--	--	--	--	1	16	160	10.14	1	12	122	10.53
Sandstone and quartzite ³	5	897	10,900	12.12	5	1,080	11,800	10.90	6	1,320	15,100	11.43
Slate	6	237	2,330	9.86	6	249	2,640	10.63	4	204	1,840	9.01
Miscellaneous stone	23	2,480 ^r	23,900 ^r	9.63	18	1,020	10,900	10.72	18	945	9,140	9.68
Total or average	XX	5,480 ^r	55,900 ^r	10.21	XX	6,240	64,700	10.37	XX	6,070	62,100	10.23

^rRevised. XX Not applicable. -- Zero.

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 kinds of stone.

³Includes sandstone-quartzite reported with no distinction between the two kinds of stone.

TABLE 3
VERMONT: CRUSHED STONE SOLD OR USED BY PRODUCERS
IN 2010, BY USE¹

(Thousand metric tons and thousand dollars)

Use	Quantity	Value
Construction:		
Coarse aggregate (+1½ inch):		
Macadam	W	W
Riprap and jetty stone	31	434
Filter stone	67	890
Other coarse aggregate	W	W
Coarse aggregate, graded:		
Concrete aggregate, coarse	149	2,290
Bituminous aggregate, coarse	57	954
Railroad ballast	38	559
Other graded coarse aggregate	W	W
Fine aggregate (-¾ inch):		
Stone sand, concrete	W	W
Stone sand, bituminous mix or seal	49	750
Screening, undesignated	W	W
Other fine aggregate	W	W
Coarse and fine aggregates:		
Graded road base or subbase	253	3,060
Unpaved road surface	133	1,520
Crusher run or fill or waste	150	2,050
Other coarse and fine aggregates	W	W
Other construction materials	21	269
Agricultural, agricultural limestone	W	W
Unspecified:²		
Reported	1,230	14,100
Estimated	3,440	33,800
Total	6,240	64,700

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

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

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

TABLE 4
VERMONT: CRUSHED STONE SOLD OR USED BY PRODUCERS
IN 2011, BY USE¹

(Thousand metric tons and thousand dollars)

Use	Quantity	Value
Construction:		
Coarse aggregate (+1½ inch):		
Riprap and jetty stone	165	2,300
Filter stone	1	19
Unspecified coarse aggregate	193	1,580
Coarse aggregate, graded:		
Concrete aggregate, coarse	W	W
Bituminous aggregate, coarse	W	W
Bituminous surface-treatment aggregate	W	W
Railroad ballast	W	W
Unspecified graded coarse aggregate	341	1,880
Fine aggregate (-¾ inch):		
Stone sand, bituminous mix or seal	W	W
Screening, undesignated	74	492
Unspecified fine aggregate	18	115
Coarse and fine aggregates:		
Graded road base or subbase	250	2,930
Unpaved road surface	150	1,340
Terrazzo and exposed aggregate	(3)	3
Crusher run or fill or waste	78	641
Unspecified coarse and fine aggregates	403	2,850
Agricultural, agricultural limestone	W	W
Unspecified: ²		
Reported	842	8,870
Estimated	3,230	34,000
Total	6,070	62,100

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

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

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

³Less than ½ unit.

TABLE 5
VERMONT: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2010,
BY MAJOR USE CATEGORY¹

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate and concrete products ²	238	\$2,280	\$9.60
Asphaltic concrete aggregates and road base materials ³	908	7,140	7.87
Fill	295	1,050	3.56
Other miscellaneous uses ⁴	215	1,370	6.39
Unspecified: ⁵			
Reported	382	2,900	7.59
Estimated	2,730	20,500	7.50
Total or average	4,820	35,600	7.38

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 (lime).

⁴Includes filtration, snow and ice control, and railroad ballast.

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

TABLE 6
VERMONT: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2011,
BY MAJOR USE CATEGORY¹

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate and concrete products ²	189	\$1,640	\$8.68
Asphaltic concrete aggregates and road base materials ³	1,130	8,100	7.17
Fill	135	589	4.36
Other miscellaneous uses ⁴	393	1,930	4.91
Unspecified: ⁵			
Reported	354	2,840	8.02
Estimated	2,850	18,600	6.53
Total or average	5,050	33,700	6.67

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 and lime).

⁴Includes filtration, railroad ballast, and snow and ice control.

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