

THE MINERAL INDUSTRY OF NEW HAMPSHIRE

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

In 1998, the preliminary estimated value¹ of nonfuel mineral production for New Hampshire was about \$53 million, according to the U.S. Geological Survey (USGS). This was a 9% increase from that of 1997.² Because data for crushed limestone, sandstone, and dimension granite have been withheld to avoid disclosing company proprietary data, the actual total values for 1997 and 1998 are higher than those reported in table 1. The State's total nonfuel mineral production value increased in 1997 and 1998.

Construction sand and gravel, a high-volume, low-value mineral commodity, was New Hampshire's leading nonfuel mineral commodity, accounting for about 73% of its apparent nonfuel mineral value. Crushed stone was the State's second leading nonfuel mineral. In 1998, the increases in the values of both mineral commodities combined to account for virtually all of New Hampshire's increase in value. Although production of dimension granite only decreased by about 4%, a 40% drop in its value somewhat mitigated the year's overall gain. In 1997, crushed stone led the State's mineral

commodities with more than a \$3.6 million increase; dimension granite also increased, while all other commodities remained unchanged.

A variety of geologic maps, as well as publications related to New Hampshire's nonfuel mineral resources and markets, are available for purchase from the State government. Two geologic maps of New Hampshire were recently made available over the Internet: a *Generalized Bedrock Geologic Map of New Hampshire* and a *Simplified Bedrock Geologic Map of New Hampshire*. These maps were adapted from the full-size original 1997 edition of *Bedrock Geology Map of New Hampshire*, Geologic Map GEO-1, which was produced as a joint project and in cooperation with the USGS. Several surficial geologic maps were published in 1997 as open file reports (OFR): a map of the Mount Pawtuckaway quadrangle, Rockingham County, NH: NH Geologic Survey OFR-97-1, and a second map of the Penacook quadrangle, Rockingham County, NH: NH Geological Survey, OFR-97-2. Additionally, a series of peat resource maps is available.

New Hampshire mineral publications that are available are as follows: *Construction aggregate resources of New England: An analysis of supply and demand: Boston, MA*, New England Governors' Conference, Inc., 1995 (both full report and executive summary); *New Hampshire sand and gravel resources: Boston, MA*, New England Governors' Conference, Inc., 1993, including three map sheets, scale 1:250,000; *Construction aggregate demand in the New England States: Boston, MA*, New England Governors' Conference, Inc., 1992; and *Bibliography and Index of New Hampshire Geology* (selected from publications indexed in GeoRef data base by American Geologic Institute), New Hampshire Department of Environmental Services, Geological Survey, 1991.

Information regarding the cost and ordering procedures for any of these publications may be obtained through the Office of the State Geologist or over the Internet at <http://www.state.nh.us/des/geo1link.htm>.

¹The 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 1998 USGS mineral production data published in this chapter are preliminary estimates as of February 1999 and are expected to change. 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. A telephone listing for the specialists may be retrieved over the Internet at <http://minerals.usgs.gov/minerals/contacts/comdir.html>; by using MINES FaxBack at (703) 648-4999 from a fax machine with a touch-tone handset (request Document #1000 for a telephone listing of all mineral commodity specialists); or by calling USGS information at (703) 648-4000 for the specialist's name and number. All Mineral Industry Surveys—mineral commodity, State, and country—also may be retrieved over the Internet at <http://minerals.usgs.gov/minerals>; facsimile copies may be obtained from MINES FaxBack.

²Values, percentage calculations, and rankings for 1997 may vary from the *Minerals Yearbook, Area Reports: Domestic 1997, Volume II*, owing to the revision of preliminary 1997 to final 1997 data. Data for 1998 are preliminary and expected to change, while related rankings may also be subject to change.

TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN NEW HAMPSHIRE 1/ 2/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1996		1997		1998 p/	
	Quantity	Value	Quantity	Value	Quantity	Value
Clays: Common	3	16	--	--	--	--
Gemstones	NA	6	NA	6	NA	6
Sand and gravel: Construction	7.620	36.500	8.440	36.400	8.780	39.000
Stone:						
Crushed 3/	1.430	8.650	1.970	12.300	2.200	14.100
Dimension metric tons	29,000	6,500	W	W	W	W
Total 4/	XX	51.700	XX	48.700	XX	53.100

p/ Preliminary. NA Not available. W Withheld to avoid disclosing company proprietary data. 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/ Excludes certain stones, values which must be concealed to avoid disclosing company proprietary data.

4/ Partial total, excludes values which must be concealed to avoid disclosing company proprietary data.

TABLE 2
NEW HAMPSHIRE: CRUSHED STONE SOLD OR USED, BY KIND 1/

Kind	1996				1997			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Granite	2 r/	W	W	W	3	W	W	W
Limestone	1	(2/)	(2/)	(2/)	1	(2/)	(2/)	(2/)
Sandstone	1	(2/)	(2/)	(2/)	1	(2/)	(2/)	(2/)
Traprock	8	W	W	W	9	W	W	W
Total	XX	1,430	8,650	6.06	XX	1,970	12,300	6.23

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.

2/ Excluded from State total to avoid disclosing company proprietary data.

TABLE 3

NEW HAMPSHIRE: CRUSHED STONE SOLD OR USED BY PRODUCERS
IN 1997, BY USE 1/ 2/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Coarse aggregate (+1 1/2 inch):			
Riprap and jetty stone	17	\$106	\$6.24
Other coarse aggregates 3/	110	678	6.16
Coarse aggregates graded:			
Concrete aggregate, coarse	115	863	7.50
Bituminous aggregate, coarse	256	1,690	6.61
Other graded coarse aggregate	844	5,720	6.78
Fine aggregate (-3/8 inch): Other fine aggregates 4/			
238	1,380	5.82	
Coarse and fine aggregates:			
Graded road base or subbase	82	379	4.62
Other coarse and fine aggregates 5/	168	800	4.76
Unspecified: 6/			
Actual	W	W	W
Estimated	W	W	W
Total	1,970	12,300	6.23

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

1/ Includes granite and traprock; excludes limestone from State total to avoid disclosing company proprietary data.

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

3/ Includes macadam and filter stone.

4/ Includes stone sand (concrete), stone sand (bituminous mix or seal), and screening (undesigned).

5/ Includes crusher run (select material or fill) and unpaved road surfacing.

6/ Includes reported and estimated production without a breakdown by end use.

TABLE 4

NEW HAMPSHIRE: CRUSHED STONE SOLD OR USED
BY PRODUCERS IN 1997, BY USE AND DISTRICT 1/

(Thousand metric tons and thousand dollars)

Use	District 1	
	Quantity	Value
Construction aggregates:		
Coarse aggregate (+1 1/2 inch) 2/	W	W
Coarse aggregate, graded 3/	1,160	7,890
Fine aggregate (-3/8 inch) 4/	149	741
Coarse and fine aggregate 5/	182	843
Unspecified 6/	2,150	14,000
Actual	W	W
Estimated	W	W
Total	1,970	12,300

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

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

2/ Includes filter stone, macadam, other coarse aggregate, and riprap and jetty stone.

3/ Includes concrete aggregate (coarse), bituminous aggregate (coarse), and other coarse aggregate.

4/ Includes stone sand (concrete), stone sand (bituminous mix or seal), screening (undesigned), and other fine aggregate.

5/ Includes crusher run (select material or fill), graded roadbase or subbase, unpaved road surfacing.

6/ Includes reported and estimated production without a breakdown by end use.

TABLE 5
 NEW HAMPSHIRE: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1997,
 BY MAJOR USE CATEGORY 1/

Use	Quantity (thousand metric tons)	Value (thousands)	Value per ton
Concrete aggregate and concrete products 2/	2,040	\$11,300	\$5.52
Asphaltic concrete aggregates and other bituminous mixtures	337	1,840	5.47
Road base and coverings	838	4,110	4.91
Fill	2,070	4,170	2.02
Snow and ice control	149	606	4.07
Railroad ballast	34	267	7.85
Other miscellaneous uses 3/	284	1,120	3.93
Unspecified: 4/			
Actual	1,350	6,320	4.68
Estimated	1,340	6,670	4.99
Total or average	8,440	36,400	4.79

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

2/ Includes plaster and gunite sands.

3/ Includes filtration.

4/ Includes reported and estimated production without a breakdown by end use.